# The ${ }^{\prime}$ mdustry Analysis Division's 

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## Executive Summary

- Rates for Local Service
- The average rate paid by residential customers for unlimited local touch-tone calling rose to $\$ 19.98$ in 1995. This represents an increase of less than $1 \%$ over the average rate in 1994. Charges for connection of a residential phone line fell by $0.5 \%$ in 1995.
- Lifeline service, a program subsidizing monthly phone charges for low-income households, was available in 73\% of the cities sampled. In 1995, the average monthly benefit to participants was $\$ 9.06$. Link-up, which subsidizes charges for the connection of a phone line, was available in $96 \%$ of the cities sampled. The average benefit for the connection of phone service was $\$ 26.66$.
- The average rate paid by business customers for a single phone line rose from $\$ 41.64$ in 1994 to $\$ 41.77$ in 1995. Charges for connection of a single business phone line fell by $3 \%$ to $\$ 72.32$ in 1995 . Charges for multi-line service and connection exhibited similar patterns.
- Rates for Toll Service
- AT\&T, MCI, and Sprint raised basic schedule interstate toll rates for residential customers twice in 1996. The Consumer Price Index for interstate toll calls rose by $3.7 \%$ in 1996, while the index for intrastate toll calls rose by $6.1 \%$.
- Interexchange carriers continue to offer discount and promotional programs to residential customers. For a consumer spending $\$ 10-\$ 15$ per month, the savings over the course of a year can amount to $\$ 25-\$ 40$. High-volume callers can see substantial savings in their long-distance bills as a result of these discounts.
- Since 1995, Sprint has offered a calling plan with rates that are dependent only on the time-of-day the call is placed. In 1996, AT\&T and MCI introduced similar flatrate domestic calling plans to the residential market. The rates on these calling plans, in addition to being distance-independent, do not vary by time-of-day. Lowvolume callers may see substantial savings by switching to a flat-rate calling plan.
- Resellers, aggregators, and dial-around carriers continue to offer competitive rates to consumers willing to shop around.
- Consumer Expenditures for Telephone Service
- Monthly expenditures on telephone service in those households with telephone service rose by $5 \%$ to $\$ 61$ in 1994 . Telephone service continues to comprise about $2 \%$ of household expenditures.
- Urban households continue to spend more on telephone service than do rural households.
- Black households spend more on telephone service than do non-black households.
- Monthly expenditures on telephone service are highest in the western region of the U.S.


## INTRODUCTION

This report presents information compiled by the Bureau of Labor Statistics (BLS), the Bureau of Economic Analysis (BEA), the Rural Utilities Service (RUS), the Bureau of the Census, and the FCC's Common Carrier Bureau Industry Analysis Division. The report contains historical data, background material and descriptions of methodology. It is intended to assist in the analysis and interpretation of telephone price and expenditure trends.

Section 1 describes the BLS telephone price index series, and shows year-to-year index changes to the present. Telephone prices rose rapidly in the early 1980s, following a major rise in inflation in the overall economy. In 1984, the FCC implemented access charge policies which shifted the recovery of some costs from interstate toll rates to subscriber line charges. The indices show interstate rates falling after 1984, and local rates rising. These trends are shown in Table 1 and Figures 1 through 4. Section 1 also presents a long term comparison of telephone rates and overall inflation.

Section 2 describes the local rate survey conducted by the Industry Analysis Division and presents rate averages for the local services used by ordinary residential customers. Table 2 presents detailed estimates of charges to residential customers. As of October 1995, residential customers paid an average of $\$ 13.62$ for a single party access line. This amount was higher than the revised average for October 1994 of $\$ 13.28$, and $\$ 1.06$ higher than the average from October 1986. Including subscriber line charges, touch-tone service, and taxes, the average monthly bill was $\$ 19.98$. The section also discusses information on extended area charges, connection charges, and inside wiring maintenance plans.

Section 3 describes the survey of local business rates conducted by the Industry Analysis Division. Table 3 presents rates charged to three types of business customers -a single line business, a small business with a key system, and a larger business with a PBX system. Business customers pay significantly higher local rates than do residential customers. In October 1995, single line business customers paid an average of \$41.77 for local service, including touch-tone service, subscriber line charges, and taxes. PBX trunks cost an average of $\$ 53.22$. These averages include 200 calls per line per month in areas where business customers are required to take measured or message rate service. Section 3 also presents information on measured service rates, inside wiring charges for single line business customers, and connection charges.

Section 4 presents data on lifeline and Link-Up rates. Table 4 compares averages for generally available rates with averages for subsidized rates. On average, customers who qualify for lifeline service save about $\$ 9$ per month. Customers who qualify for connection assistance have their connection charges reduced by more than $\$ 26$. Out of 95 sample cities, carriers in 70 cities had lifeline programs, and in 90 cities had Link-Up programs.

Section 5 provides data on rural telephone service. Table 5 summarizes rate levels in Wisconsin, which had relatively comprehensive historical data covering many small rural carriers. The Wisconsin data show the relationship between rural rates and urban rates in the state. In addition the Wisconsin data show that rural rate increases have been similar to changes in rates nationally, and that the number of very small exchanges has been shrinking. Table 7 presents Rural Utilities Service data on average revenue per rural subscriber. These data, along with Figure 11 and Figure 12, show that rural rate changes have been comparable to nationwide changes. Figure 13 illustrates the great increases in toll service expenditures by rural subscribers. Rate levels for RUS borrowers in 1994 are also examined. The data show that rural local service rates appear to be about $\$ 2.50$ below those of urban areas.

Section 6 describes data on expenditures for telephone service. The Bureau of Labor Statistics' Consumer Expenditure Survey supplies the most detailed information on telephone expenditures by households. Table 8 shows total telephone expenditure levels for all households, and for many demographic breakdowns, such as urban customers versus rural customers. In 1994, the average household spent $\$ 690$ for telephone service, representing about $2.2 \%$ of all household expenditures. Households with incomes in the top $20 \%$ spent over twice as much for telephone service as households in the bottom $20 \%$. Low income households, however, devoted twice as much of their overall expenditures to telephone service.

Table 9 presents estimates of monthly telephone expenditures for households with telephone service. By removing the cost of basic local service, the table provides an estimate of household expenditures for toll and other services. Each of the demographic groups shown in the table have significant toll expenditures. Figure 15 tracks expenditure increases by several demographic groups, and suggests that toll usage has grown rapidly for many segments of society.

Household expenditure data are also available from the Bureau of Economic Analysis and the Census of Communications Firms. Figure 16 shows telephone consumption expenditures as a percentage of personal consumption expenditures (PCE). The percentage rose steadily from the end of World War II until 1975. Rates for basic local service rose most rapidly between 1975 and 1985. The percentage of PCE for telephone service actually fell during that period, because inflation in the overall economy overshadowed increases in telephone rates.

Table 11 shows household expenditure data for 26 cities. These data are used to show that much of the difference in telephone expenditures is due to differences in average household incomes. Differences in local rate levels explain relatively little of the city-to-city differences in household telephone expenditures.

Section 7 reviews changes in local rates. Table 12 presents selected rate averages for 1983 to the present. Figure 18 shows how the components of the residential charge have changed over time. The base rate has remained about the same since 1985.

Increases since 1985 primarily have resulted from subscriber line charges and increased taxes. Figures 19 through 22 show that changes in the survey rate averages are fairly consistent with changes in published telephone service price indices. This suggests that the 95 city averages are reliable indicators of local rate changes over time. Section 7 also presents AT\&T estimates of residential rate averages for 1940 through 1983. Since 1970, the cost of local residential service has risen less than the overall rate of inflation.

Section 8 reviews long term changes in toll rates. It is based on the basic schedule of charges paid by residential customers and excludes business services such as 800 calling, private networking, and special access. Table 13 shows selected AT\&T interstate toll rates from 1927 to the present. Figure 23 shows the charge for ten-minute day-time short haul, middle distance, and coast-to-coast calls. In 1930, a coast-to-coast call cost more than 100 times as much as a short distance interstate call. Today, the charges are nearly equal. Figure 24 presents the same rates as Figure 23, expressed in today's dollars. This graph shows how the real cost of medium distance and long haul calls have continuously fallen since 1935. The cost of the shortest haul calls have varied, but are not significantly higher than they were in 1935 after adjusting for inflation. Because many customers participate in calling plans, and therefore do not pay the basic schedule rates, we briefly examine some of the trends in discount calling plans.

This publication also contains several appendices. Appendix 1 contains selected monthly CPI and PPI index levels from 1972 to the present. Appendix 2 contains selected residential rate information for the 95 sample cities as of October 1995. The data include the monthly charge for unlimited service, the connection charge and comparable subsidized rates. The appendix also shows touch-tone and inside wiring maintenance plan charges. Appendix 3 contains business rate information for the same 95 cities. The data include the monthly line charges for local business service for single line, key system, and PBX customers. Appendix 4 shows monthly charges and connections charges for residential service by city for 1983 through 1995.

Appendix 5 compares local rate averages by company with revenue data from the Statistics of Communications Common Carriers. Table A5-1 shows monthly local and toll service revenues per access line. Figure 34 shows that the 95 city averages are fairly consistent with the revenue per access line data.

Appendix 6 contains long term series of rate levels, price indices, and consumer expenditures for telephone service. Appendix 7 contains technical notes on the telephone service price indices produced by the Bureau of Labor Statistics. Appendix 7 also highlights differences between the CPI and PPI indices.

Appendix 8 contains data on expenditures for communications services by sector of the economy. Based on the 1987 benchmark Census of Manufacturers, businesses spent less than one cent for communications service for each dollar of final revenue. This appendix also shows telephone industry purchases from other sectors of the economy.

Appendix 9 documents the basic rate schedules for interstate toll calls charged by AT\&T, MCI, and Sprint since 1980.

This report contains current BLS and BEA data. In some cases published data are slightly different from previously published figures. Similarly, the local rate averages for prior periods reflect some revisions. The statistical data presented in this report summarize information collected by the FCC's Industry Analysis Division. The data contained in this report can be obtained from the FCC - State Link computer bulletin board at (202) 418-0241 or through the FCC-State Link on the Internet, accessible from the Common Carrier Bureau's Home Page at http://www.fcc.gov/ccb/. Copies of the report may be purchased by calling International Transcription Services (ITS) at (202) 857-3800.

## 1. Price Index Data

The U.S. Department of Labor's Bureau of Labor Statistics (BLS) calculates telephone service price indices as part of two major programs. Its Consumer Price Index (CPI) program publishes indices based on the amount of money that residential customers in urban areas pay for telephone service. The Producer Price Index (PPI) program publishes indices based on the amount of money that companies receive for providing telephone service. Unlike the CPI, the PPI indices cover business as well as residential telephone service. Appendix 1 contains monthly values for the telephone service indices. The CPI and PPI telephone price indices are described in greater detail in Appendix 7.

Figure 1


CPI Telephone vs. CPI All Items 1982-1984 = 100
inflation during the last eight years.

Table 1 shows recent annual percent changes for the indices shown in Appendix 1. The CPI for all items, which reflects overall inflation for consumers, and selected telephone service price indices are shown in the first three figures. Figure 1 compares the CPI for all items with the CPI for all telephone services. Changes in telephone service prices have traditionally lagged changes in overall inflation. This accounts for the relatively steady level of telephone prices in the late 1970s and the relatively high increases from 1980 to 1985. On the whole, telephone prices have increased by less than the overall level of

The PPI values contained herein are from the 1972 to 1995 indices. BLS revised the PPI telephone methodology and samples in July 1995. The BLS began publishing a new series of telephone indices which are structured and calculated differently than the 1972-1995 series.

| Table 1-A <br> Consumer Price Indices (1980-1996) <br> \% Change December of Previous Year Through December of the Year Shown |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | All Goods \& Services | Telephone Services | Local Services | Interstate Toll Service | Intrastate <br> Toll Service |
| 1980 | 12.5\% | 4.6\% | 7.0\% | 3.4\% | -0.6\% |
| 1981 | 8.9\% | 11.7\% | 12.6\% | 14.6\% | 6.2\% |
| 1982 | 3.8\% | 7.2\% | 10.8\% | 2.6\% | 4.2\% |
| 1983 | 3.8\% | 3.6\% | 3.1\% | 1.5\% | 7.4\% |
| 1984 | 3.9\% | 9.2\% | 17.2\% | -4.3\% | 3.6\% |
| 1985 | 3.8\% | 4.7\% | 8.9\% | -3.7\% | 0.6\% |
| 1986 | 1.1\% | 2.7\% | 7.1\% | -9.4\% | 0.3\% |
| 1987 | 4.4\% | -1.3\% | 3.3\% | -12.4\% | -3.0\% |
| 1988 | 4.4\% | 1.3\% | 4.5\% | -4.2\% | -4.2\% |
| 1989 | 4.6\% | -0.3\% | 0.6\% | -1.3\% | -2.6\% |
| 1990 | 6.1\% | -0.4\% | 1.0\% | -3.7\% | -2.2\% |
| 1991 | 3.1\% | 3.5\% | 5.1\% | 1.3\% | -1.5\% |
| 1992 | 2.9\% | -0.3\% | 0.5\% | -1.3\% | -2.4\% |
| 1993 | 2.7\% | 1.8\% | 1.0\% | 6.5\% | 0.2\% |
| 1994 | 2.7\% | 0.7\% | -0.3\% | 5.4\% | -1.0\% |
| 1995 | 2.5\% | 1.2\% | 2.6\% | 0.1\% | -3.8\% |
| 1996 | 3.6\% | 2.1\% | 0.9\% | 3.7\% | 6.1\% |


| Table 1-B <br> Producer Price Indices (1980-1994) <br> \% Change December of Previous Year Through December of the Year Shown |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Local Services | Local Residential Services | Local Business Services | Toll Service | Intrastate MTS | Interstate MTS | International MTS |
| 1980 | 5.5\% | 7.1\% | 5.8\% | 4.1\% | 2.3\% | 5.5\% | 5.3\% |
| 1981 | 13.5\% | 15.6\% | 15.7\% | 10.8\% | 8.0\% | 15.9\% | -13.2\% |
| 1982 | 7.5\% | 9.0\% | 5.8\% | 3.8\% | 1.7\% | 3.9\% | 10.5\% |
| 1983 | 1.5\% | 0.2\% | 2.2\% | 1.6\% | 3.9\% | 0.0\% | 0.4\% |
| 1984 | 13.8\% | 10.4\% | 24.1\% | -1.6\% | 3.8\% | -5.1\% | -6.4\% |
| 1985 | 9.2\% | 12.4\% | 5.6\% | -0.8\% | 2.1\% | -3.0\% | -0.3\% |
| 1986 | 5.9\% | 8.9\% | 2.5\% | -7.0\% | -3.5\% | -10.1\% | -2.8\% |
| 1987 | 1.2\% | 2.6\% | -0.8\% | -7.9\% | -3.0\% | -11.8\% | -0.4\% |
| 1988 | 3.2\% | 4.6\% | 0.5\% | -2.3\% | -3.8\% | -2.1\% | 0.0\% |
| 1989 | 1.3\% | 1.9\% | 0.6\% | -0.8\% | 0.5\% | -1.7\% | 0.0\% |
| 1990 | 0.9\% | 1.5\% | 0.0\% | -1.1\% | -2.2\% | -0.1\% | -0.5\% |
| 1991 | 1.3\% | 2.1\% | 0.0\% | -1.8\% | -2.6\% | -1.3\% | 0.2\% |
| 1992 | -0.2\% | -0.2\% | -0.2\% | 1.0\% | 1.3\% | 1.0\% | 0.0\% |
| 1993 | 1.0\% | 0.8\% | 2.3\% | 0.8\% | -1.1\% | 3.8\% | -17.9\% |
| 1994 | 0.5\% | 0.7\% | -0.2\% | 2.3\% | -1.4\% | 6.1\% | 0.0\% |


| Table 1-C <br> Selected Producer Price Indices ${ }^{1}$ <br> \% Change from December 1995 to December 1996 |  |  |  |
| :---: | :---: | :---: | :---: |
| Telephone Communications, except Radiotelephone |  | 0.0\% |  |
| Local Service, except Private Lines |  | 0.4\% |  |
| Residence Local Service | 0.3\% | Coin Local Service | 1.4\% |
| Business Local Service | 0.3\% | Directory Assistance | 0.0\% |
| Public Switched Toll Service |  | -0.2\% |  |
| Residence Switched Toll Service |  | 0.5\% |  |
| Intrastate Residence Switched Toll Service <br> Interstate Residence Switched Toll Service | $\begin{aligned} & -0.2 \% \\ & 6.1 \% \end{aligned}$ | International Residence Switched Toll Service | -17.9\% |
| Business Switched Toll Service |  | -1.2\% |  |
| Business Switched Access Toll Service | -0.1\% | Business Special Access Switched Toll Service, except Private Lines | -3.0\% |
| Outbound Business Switched Access Toll Service | -0.8\% | Outbound Business Special Access Switched Toll Service | -4.3\% |
| Intrastate Business Switched Access Toll Service, Outbound | 1.9\% | Intrastate Business Special Access Switched Toll Service, Outbound | 9.7\% |
| Interstate Business Switched Access Toll Service, Outbound | 0.0\% | Interstate Business Special Access Switched Toll Service, Outbound | -6.0\% |
| International Business Switched Access Toll Service, Outbound | -12.4\% | International Business Special Access Switched Toll Service, Outbound | -11.6\% |
| Inbound Business Switched Access Toll Service | 0.9\% | Inbound Business Special Access Switched Toll Service | -0.7\% |
| Intrastate Business Switched Access Toll Service, Inbound | -8.2\% | Intrastate Business Special Access Switched Toll Service, Inbound | 8.9\% |
| Interstate Business Switched Access Toll Service, Inbound | -0.7\% | Interstate Business Special Access Switched Toll Service, Inbound | 0.4\% |
| International Business Switched Access Toll Service, Inbound | -9.9\% | International Business Special Access Switched Toll Service, Inbound | -0.2\% |
| Private Line Service |  | 0.4\% |  |
| Intrastate Private Line Service | 1.2\% | LEC Intrastate Private Line Service | 1.3\% |
| Directory Advertising |  | 0.1\% |  |

[^1]Figure 2


Figure 3
CPI All Items vs CPI \& PPI Interstate
1982-1984 = 100

— CPI All Goods \& Services

-     - CPI Interstate Toll Service

PPI Interstate MTS Service

Figure 2 shows the CPI for all items, and the CPI and PPI price indices for local residential telephone service. The largest increases after divestiture are due to the federal subscriber line charges. The series should show differences over time, because the CPI covers inside wiring maintenance and customer premises equipment. In addition, the samples cover different geographic areas. Appendix 7 discusses the many differences between the CPI and PPI telephone service price indices.

Figure 3 shows the CPI and PPI for interstate message telephone service (MTS). Figure 4 shows the CPI and PPI intrastate MTS indices. As with the graph for local service, the impact of federal subscriber line charges is apparent in price indices for interstate MTS service. The imposition of subscriber line charges resulted in lower access charges to interexchange carriers. This in turn led to steep decreases in interstate MTS rates between 1984 and 1988.

Figure 4


Figure 3 and Figure 4 show the CPI and PPI toll indices moving in concert. Until July 1993, many business customers continued to take service at the same rates charged to residential customers. Business customers tend to make shorter distance calls and tend to make a higher percentage of day calls.

Several changes have occurred in the toll industry. Specialized services, such as 800 service and Megacom, have attracted an increasing share of switched traffic. The CPI does not cover these services, and the discontinued PPI sample was based on usage patterns from the late 1970s. The revised PPI indices should provide a reasonable indication of pricing trends for these specialized services. Another change has been the rapid growth of international service. International service represented about 7\% of billed long distance revenues in 1984, and represents more than 14\% today. The CPI sample does not include international rates. In contrast to the practice followed for many years, AT\&T, MCI and Sprint now have different basic MTS rate schedules for business and residential customers. Finally, since 1992, AT\&T and other carriers have increased basic schedule rates at the same time that they have increased discount offerings to many customers. These changes mean that the MTS indices, which principally measure changes in domestic basic schedule rates, are not as representative of overall rate changes as they were before 1992.

The CPI toll indices did not fully reflect the increased use of discount plans in the past. Since 1994, BLS has taken steps to more accurately reflect their usage. As a consequence, the CPI interstate price index may overstate changes since 1992. For example, the CPI interstate toll index shows domestic rates increasing $7.5 \%$ between December 1992 and May 1995. AT\&T's "actual price index" (API) for residential services, which AT\&T submitted with tariff filings, showed interstate residential rates decreasing by $3.9 \%$ over the same period. AT\&T's API assumes that all callers are participating in a discount calling plan, thereby providing an estimate of the upper bound on the effects of discount plans on the CPI. Unlike the CPI, AT\&T's APIs also include international rates. In addition, the CPI price samples are weighted using historic usage levels. In contrast, using data from AT\&T tariff filings, AT\&T's API averages in discounts at usage levels forecast for some future point in time. If these discounts are excluded from the API calculations, AT\&T's price index would show an increase of over $13 \%$ during the period. Since the introduction of True Rewards and True USA Savings in December, 1993, there
has been an increase in the number of promotional and discount offerings. The increase in these offerings results in projected prices being lower, thus AT\&T's API is lower. However, the actual price ultimately paid by the customer depends on whether or not they take advantage of the plans offered.

The discontinued PPI international index measured changes in carrier revenue per unit of service, rather than changes in rates paid by customers. Table 1B shows that the discontinued PPI for international MTS dropped 18\% in 1993, but did not change in 1994. Base rates for international MTS increased during 1993 and accounting rates fell. These changes, however, were offset by the drop in the value of the dollar. Changes in the value of the dollar change the actual dollar payouts from U.S. carriers to foreign carriers. As Table 1C shows, July 1995 to July 1996 changes in the revised PPI measures of international rates indicate that downward pressure on international rates has continued.

Local telephone rates rose at a similar pace in 1990 and 1991. Published CPI index levels, however, reflect an $\$ 8.72$ per access line credit for Southwestern Bell customers in Texas in December 1990. This appears to have caused the local service and the overall telephone service indices to drop significantly in December 1990. Since the credit applied to one month only, the indices returned to their previous level in January 1991. As a result, the percent changes from the prior December shown in Table 1 understates the local service and overall rate increases for 1990, and overstates them for 1991.


The Bureau of Labor
Statistics began publishing a consumer price index (CPI) for telephone service in 1935. Telephone service prices were included in the overall CPI prior to 1935, but the Bureau of Labor Statistics did not publish a separate telephone service price index. The same pricing data, however, was used in developing national income account statistics. The Bureau of Economic Analysis published a Gross National Product fixed weight price index (GNP-PI) for personal consumption expenditures for telephone service. The year-toyear changes in the GNP-PI telephone index are virtually the same as the year-to-year changes in the CPI telephone index for 1935 to the present. Accordingly, the
year-to-year changes in the GNP-PI telephone index were used to extend the CPI telephone index back to 1929. The extended index is shown in Figure 5, and shows that over the whole period, the cost of telephone service has risen less than overall inflation. The data for the extended series are contained in Appendix 6.

The consumer price index measures the cost of telephone service to residential customers. Accordingly, the index measures changes in telephone service tax rates as well as changes in telephone rates. Nationwide, the federal excise tax (FET) on telephone service is the most significant tax on telephone services provided to residential customers. While the FET rate is currently 3 percent, the rate has changed significantly over time. Its impact is felt even more in those locales with high tax rates, as the FET is levied on all telephone charges including other taxes.

Congress enacted the first

Figure 6
 FET for communications in 1914. At that time, the FET was assessed as a tax of one cent on toll telephone calls and telegraph messages costing over 15 cents. The tax was repealed in 1916, reinstated in 1918, repealed again in 1924, and reinstated again in 1932. Rates rose in the 1930s and then increased dramatically during World War II. By 1943 the tax rate rose to $25 \%$ on all messages costing over $\$ .24$ and $15 \%$ on local service charges. The tax was reduced to a flat $10 \%$ tax in 1954. The rate was gradually reduced to $1 \%$ between 1972 and 1982 and then raised to $3 \%$ in 1983, where it remains. Figure 6 illustrates the changes in federal excise taxes over time.

Appendix 6 contains estimated FET rates for 1932 to the present. For 1929 through 1953, the rates were estimated by dividing FET collections by revenues, with the results averaged for periods with the same tax rates. The statutory rates are shown for 1954 to the present, with the local rate reduced by 10\% to reflect the tax exemption for connection charges and for some classes of customers. The local and toll tax rates were combined by using revenue data. The resulting index was used to create an adjusted CPI telephone service index. Figure 5 shows how the CPI for telephone service would have been different if the FET had been excluded from the telephone index.

AT\&T price indices for local, intrastate, and interstate service are available for the period 1940 through 1973. These indices cover both business and residential rates.

Figure 7
AT\&T Rate Index
$1940=100$


AT\&T calculated the indices by chaining the estimated annualized revenue impact of rate changes. For each year, AT\&T estimated a base revenue by adjusting actual revenues by the effective amount of rate changes for the year. The base revenue represented the amount of revenue they would have collected if rates on January 1 had remained in effect for the whole year. AT\&T then estimated the amount of revenue change that would have rsulted if the new rates had been in effect for the whole year. These revenue changes were divided by the base revenues to estimate the percentage change in rates for the year. The percentage changes were linked together to create the indices. This methodology differs from the Laspeyre's fixed weight approach used to construct the CPI and PPI indices.

Appendix 6 contains the AT\&T indices and Figure 7 shows these indices. The AT\&T indices show local rates rising 88\% between 1940 and 1973. Intrastate toll rates rose by $45 \%$ and interstate rates fell by $22 \%$ over this period. The interstate index includes international service, which accounted for about 5\% of the toll market in 1973. The CPI Telephone Service index rose by about 74\% between 1940 and 1973.

Figure 8


Since divestiture, consumer expenditures on local telephone service, as measured by the CPI have increased at a slightly faster rate than overall inflation, as shown in Figure 8. However, this differencehas been declining over the past few years. During the seven year period before the divestiture local service prices also increased. The patterns for interstate and intrastate toll service are different, however. Before divestiture both were growing faster than inflation, while after, these have both been outpaced by inflation. Although they changed over time, prices are near the same levels they were in 1977.

Other figures showing CPI and PPI values compared to each other were presented in Figures 1 through 5.

Corresponding to the increased consumer expenditures for local telephone service there has also been an increase in revenues per unit of production from local service as measured by the producer price

Figure 9


Local
1940-1959
1960-1969
0.65

1980 - present
0.55 index. Figure 9 shows much the same pattern as the CPI indices in Figure 8; the PPI for local services has risen faster than the overall PPI for finished goods, while Interstate and Intrastate toll have been below the overall PPI.

Appendix 6 contains indices that have been created by linking the AT\&T rate change indices (1940 1972) to corresponding producer price indices (1972 - present). The following weights were used to combine year-to-year percentage changes in the linked indices and thus create the AT\&T-PPI composite telephone service rate index.

|  | Local | Intrastate | Interstate |
| :---: | :---: | :---: | :---: |
| $1940-1959$ | 0.75 | 0.11 | 0.14 |
| $1960-1969$ | 0.65 | 0.15 | 0.20 |
| $1980-$ present | 0.55 | 0.19 | 0.26 |

Figure 10


Figure 10 compares the AT\&T-PPI composite index for 1940 to 1994 with the CPI Telephone Service index. Overall, the CPI Telephone Service index increased about $0.3 \%$ per year faster than has the composite index. The CPI Telephone Service index does not cover international rates, which have fallen significantly since 1940. Differences in the indexing method may also explain some of the $0.3 \%$ per year difference. It is also possible that the rates for business services have fallen
more rapidly than the rates for residential services. The year-to-year percentage changes in the two series are highly correlated. In sum, it appears that the linked local, intrastate, and interstate indices are reasonably good indicators of rate changes from 1940 to 1994.

## 2. Residential Rates for Local Service

Local residential rates were collected for 95 cities for October 15, 1995. The 95 city sample was selected from the sample areas used by the Bureau of Labor Statistics as part of the CPI program in 1986. The survey sample includes the largest city in each of the CPI sample areas, and 11 additional cities. Rates were provided by telephone company tariff and rate specialists. Calls to telephone company service representatives were used to verify carrier provided data. Weighted national averages were calculated using the CPI weights for each sample area.

Table 2 presents nationwide averages for October 15, 1986 through October 15, 1995. As of October 15, 1995, the average monthly charge for private line (i.e. one party) service with unlimited local calling (i.e. "flat rate" service) was $\$ 13.62$. This amount includes surcharges and credits that are accounted as local service revenue. Local exchange customers must also pay federal and state subscriber line charges (SLCs) and taxes. Including SLCs and taxes, the average charge for rotary, unlimited private line service was $\$ 19.49$. The total monthly charge for unlimited private line service ranged from $\$ 11.96$ in Phillipsburg, New Jersey to $\$ 30.88$ in Buffalo, New York. The total charges for unlimited calling by city are contained in Appendix 2. Detailed data can be obtained through the FCC-State Link, a computer bulletin board maintained by the Industry Analysis Division (202-418-0241) or through the FCC-State Link on the Internet, accessible from the Common Carrier Bureau's Home Page at http://www.fcc.gov/ccb/.

Residential customers in four sample cities -- New York City, Chicago, Milwaukee, and Racine, Wisconsin -- are not offered a local service option that includes unlimited local calls. The nationwide average rate for unlimited calling was calculated by using the measured service rates for these cities, and includes the cost of 100 five minute calls. Ameritech reported that residential customers in Wisconsin made about 130 local calls per month in 1992. Customers in Huntington, West Virginia have a hybrid service, with unlimited calling within their home exchange plus a handful of surrounding exchanges, and measured rate service within an extended local calling area. The rate for the service most commonly chosen by customers in Huntington is $\$ 22$ plus taxes and surcharges. The unlimited calling rate average would have been $\$ 0.82$ higher in October 1995 if 50 additional local calls had been included in New York City, Chicago, Milwaukee, Racine, and Huntington.

The average monthly charge for a private line with unlimited calling rose a little less than 2.5 percent between October 1994 and October 1995. The only significant increase in local service tariff rates since 1986 occurred during the period from October 1990 to October 1991, when the average rose 5\%. Two items accounted for more than two thirds of this increase. The first factor is that the cost of local service rose about $14 \%$ in New York State. New York State accounts for about $13 \%$ of the sample weight. The second factor underlying local rate changes in the 1990's has been that some local rates have increased to offset decreases in touch-tone charges. The nationwide average monthly charge for touch-tone service decreased from \$1.47 in October 1990 to \$1.17 in October

| Table 2 <br> National Averages for Local Residential Rates ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Rates as of October 15 |  |  |  |  |  |  |  |  |  |
|  | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| Unlimited local calling | 12.58 | 12.44 | 12.32 | 12.30 | 12.39 | 13.10 | 13.12 | 13.22 | 13.28 | 13.62 |
| Federal and state SLCs | 2.04 | 2.66 | 2.67 | 3.53 | 3.55 | 3.56 | 3.55 | 3.55 | 3.55 | 3.54 |
| Taxes and 911 charges | 1.51 | 1.56 | 1.58 | 1.70 | 1.85 | 2.00 | 2.03 | 2.17 | 2.24 | 2.34 |
| Total for rotary service | 16.13 | 16.66 | 16.57 | 17.53 | 17.79 | 18.66 | 18.70 | 18.94 | 19.07 | 19.49 |
| Additional monthly charge for touch-tone service (including tax) | 1.57 | 1.52 | 1.54 | 1.52 | 1.47 | 1.17 | 1.08 | 1.04 | 0.74 | 0.49 |
| Total for touch-tone service | 17.70 | 18.18 | 18.11 | 19.05 | 19.26 | 19.83 | 19.78 | 19.98 | 19.81 | 19.98 |
| Lowest generally available monthly rate | 5.96 | 5.81 | 5.67 | 5.67 | 5.68 | 6.18 | 6.22 | 6.43 | 6.47 | 6.68 |
| Federal and state SLCs | 2.04 | 2.66 | 2.67 | 3.53 | 3.55 | 3.56 | 3.55 | 3.55 | 3.55 | 3.54 |
| Taxes and 911 charges | 0.84 | 0.94 | 0.91 | 1.03 | 1.15 | 1.28 | 1.31 | 1.45 | 1.50 | 1.56 |
| Total for rotary service | 8.84 | 9.41 | 9.25 | 10.23 | 10.38 | 11.02 | 11.08 | 11.43 | 11.52 | 11.79 |
| \# of cities in the sample offering measured service | n.a. | 76 | 77 | 79 | 82 | 85 | 86 | 86 | 87 | 88 |
| Monthly cost including 50 five-minute daytime calls | n.a. | 8.57 | 8.47 | 8.48 | 8.52 | 8.94 | 9.32 | 9.63 | 9.61 | 9.82 |
| Federal and state SLCs | n.a. | 2.69 | 2.67 | 3.53 | 3.55 | 3.56 | 3.55 | 3.55 | 3.55 | 3.51 |
| Taxes and 911 charges | n.a. | 1.25 | 1.21 | 1.37 | 1.50 | 1.60 | 1.67 | 1.82 | 1.86 | 1.93 |
| Total for rotary service | n.a. | 12.51 | 12.35 | 13.38 | 13.57 | 14.10 | 14.54 | 15.00 | 15.02 | 15.25 |
| 51st five-minute call | n.a. | 0.092 | 0.090 | 0.090 | 0.090 | 0.088 | 0.088 | 0.089 | 0.088 | 0.088 |
| Lowest cost inside wiring maintenance plan | 0.58 | 0.85 | 0.89 | 1.07 | 1.07 | 1.20 | 1.25 | 1.31 | 1.41 | 1.52 |
| Monthly charge for optional extended area service | n.a. | n.a. | 0.96 | 0.98 | 1.01 | 1.02 | 0.88 | 0.93 | 0.94 | 0.97 |
| Basic connection charge <br> Taxes | $\begin{array}{r} 45.63 \\ 2.28 \\ \hline \end{array}$ | $\begin{array}{r} 44.04 \\ 2.20 \\ \hline \end{array}$ | $\begin{array}{r} 42.94 \\ 2.11 \\ \hline \end{array}$ | $\begin{array}{r} 42.71 \\ 2.24 \\ \hline \end{array}$ | $\begin{array}{r} \hline 43.06 \\ 2.32 \\ \hline \end{array}$ | $\begin{array}{r} \hline 42.00 \\ 2.19 \\ \hline \end{array}$ | $\begin{array}{r} 41.52 \\ 2.18 \\ \hline \end{array}$ | $\begin{array}{r} \hline 41.38 \\ 2.21 \\ \hline \end{array}$ | $\begin{array}{r} \hline 41.26 \\ 2.27 \\ \hline \end{array}$ | $\begin{array}{r} 40.91 \\ 2.42 \\ \hline \end{array}$ |
| Total for rotary service | 47.91 | 46.24 | 45.05 | 44.95 | 45.38 | 44.19 | 43.70 | 43.59 | 43.53 | 43.33 |
| Additional connection charge for touch-tone service (including taxes) | 1.34 | 1.31 | 1.55 | 1.47 | 1.77 | 1.27 | 1.23 | 1.23 | 0.85 | 0.26 |
| Additional charge if drop line and connection block needed | n.a. | n.a. | 6.04 | 6.11 | 6.07 | 6.89 | 6.50 | 7.29 | 5.87 | 5.90 |

[^2]1991, and to $\$ 0.48$ in October 1995. As of October 1995, there were no monthly charges for touch-tone service in 53 of the sample cities, up from 7 sample cities in 1990.

Consumers can subscribe to a service with a lower recurring charge than the charge for unlimited private line (one party) service in 88 of the 95 sample cities, representing $95 \%$ of all urban households. Lower priced service options include two and four party line service, measured service (under which customers pay for each call), and measured party line service. Measured service can be metered (customers are charged by the minute) or message rated (customers are charged a flat amount for each call). As of October 1995, the national average for the lowest generally available recurring charge was $\$ 6.68$. The average minimum monthly bill, including subscriber line charges and taxes, was $\$ 11.79$. All 95 cities had at least one service option with a monthly charge of less than $\$ 22.13$, including subscriber line charges and taxes, and 83 had at least one option with a monthly charge less than $\$ 15$, including subscriber line charges and taxes.

The averages presented in Table 2 include only generally available rates. Thus, the averages do not reflect reduced rates that are made available to many low income customers. The most common assistance programs are the federal lifeline programs, which provide reduced monthly charges, and the federal Link-Up programs, which provide reduced connection charges. Subsidized rates are discussed in Section 4 below.

The federal Subscriber Line Charge (SLC) was $\$ 3.50$ per month for most residential customers during October 1995. This charge defrays a portion of local exchange costs that have been allocated to interstate toll services. Residents in some areas, such as those in Washington D.C., pay a lower federal SLC because their local exchange carriers have less cost per line allocated to interstate service. Intrastate SLCs, covering local costs allocated to intrastate service, are imposed in 5 of the sample cities. The intrastate SLCs range from $\$ 0.87$ per month to $\$ 2.88$ per month, and may vary within a state. For example, the intrastate SLC is $\$ 0.83$ in Indianapolis, served by Ameritech, and $\$ 2.88$ in Terre Haute, served by GTE.

In many cities the service with the lowest recurring charge was a measured service. The base rate in some cities included an allowance for a specific number of calls, but consumers in other cities would be charged for each outgoing call. In the 86 cities where measured service was available, the average monthly charge would be $\$ 9.83$ if the customer made fifty short distance calls of five minutes. This increases to $\$ 15.29$ with the inclusion of subscriber line charges and taxes. In some cities, message charges are higher if a local call is longer, covers more than a specified mileage or spans two zones. The $\$ 9.83$ average was calculated using the monthly charges for the measured rate service with the lowest recurring charge. This was for multiparty (shared line) service in some cities. The rates do not include options under which the customers would pay for a block of calling for a reduced rate.

In 1995 South Central Bell introduced a new measured service plan in some areas. This plan has two distinctive features. Customers will be billed at local service rates,
rather than toll rates, for all intralata calls. In addition, the plans have ceiling charges. Taken together, these features make the offering very attractive to customers who would otherwise have high intralata toll billings.

In other areas, many telephone subscribers pay additional monthly charges that enable them to make local calls over an extended geographic area. This means that there will be no charge, or only local measured service charges for calls that would otherwise be billed at toll rates. The local rate averages include extended area charges that are mandatory, or that are paid by most subscribers. Nine of the sample cities have optional extended area charges that were not included in the local service rate averages. Although these extended area options can substantially reduce toll charges for some customers, most subscribers do not elect the option in these cities. The charges for extended area service ranged from $\$ .97$ in Baton Rouge and New Orleans, Louisiana, to $\$ 21.00$ in Philadelphia and Pittsburgh, Pennsylvania.

An increasing number of cities are using a tax to fund emergency 911 service. In some cities a fixed amount of tax is levied on each access line. Other cities use a percentage tax. Eighty-five of the 95 sample cities had emergency 911 charges as of October 1995, compared with 25 in October 1987. The average emergency 911 charge for a residential line with unlimited calling in these cities was $\$ 0.47$. On a nationwide average basis, $\$ 0.42$ of the average of $\$ 2.34$ in taxes was collected for emergency 911 service. The implementation of emergency 911 taxes accounted for about a one percent increase in the CPI local service index in recent years. An increasing number of jurisdictions are also using a tax to fund equipment for the hearing disabled. These taxes typically add 3 cents to 20 cents per month to the cost of telephone service.

Some charges that appear on telephone bills look like taxes but are not. These can be percentage amounts or fixed amounts. Local utility commissions often authorize surcharges in lieu of having the carrier refile tariffs. The surcharge might be keyed to specific categories of cost, or might change with changes in carrier profitability. Negative surcharges have been used to implement refunds ordered by a utility commission. Carriers have been instructed to categorize surcharges according to accounting treatment. The rate averages shown in the tables include surcharges. Taxes are separately identified.

New customers must pay a connection charge. The basic connection charge covers administrative and central office costs associated with connecting service and establishing the account. The national average connection charge was $\$ 40.91$, plus $\$ 2.42$ for taxes. The total connection charge ranged from $\$ 9.82$ in Fort Dodge, lowa to $\$ 64.29$ in New York City.

The basic connection charge includes installation of a drop line and connection block in 69 of the sample cities. The drop line and connection block is needed if new telephone service is being connected at a residence that has not previously had telephone service. Telephone company personnel must run a drop line from the local loop to the
outside of the customer's premises, and terminate the line at a connection block (network interface device). The connection block is the demarcation between the telephone company's network and the customer's premises wiring.

In the 26 cities with separate drop line and connection block charges, a new hookup cost $\$ 48.89$ for connection plus $\$ 21.69$ for the drop line and connection block. The average connection charge was $\$ 37.94$ in the 69 cities where there was no separate charge for the drop line and connection block. Interestingly, the average charge for local exchange service with unlimited calling was $\$ 2.55$ greater in cities that also had a separate drop line and block charge. Thus, separate drop line and block charges tended to occur in areas that have higher charges for other local services. The nationwide average charge for connection would increase by $\$ 5.90$ if drop line and connection block charges were included.

Wiring from the connection block into the residence and to the telephone sets is termed inside wiring, and is the responsibility of the customer. Prior to 1984, local exchange service rates covered installation and maintenance of wiring on the customer's premises. These services have been unbundled and detariffed. Customers are under no obligation to obtain inside wiring maintenance or installation services from their local exchange carrier. Telephone companies often install and maintain inside wiring, charging on a time and materials basis. In addition, all telephone carriers (in rare instances through affiliates) offer to maintain inside wiring for a flat monthly charge. Most carriers have more than one optional plan. The more expensive options may include diagnosis of trouble in customer telephone sets, and a loaner telephone if the customer's telephone breaks. The average monthly charge for the least expensive wiring maintenance option was $\$ 1.50$, plus tax. These unregulated charges have increased $79 \%$ since October 1987. Carriers may also charge a one time service order fee to add or change a wiring plan.

The survey also gathered information on touch-tone charges. The number of cities in which there is a separate charge for touch-tone service is falling. New customers in 9 of the 95 cities must pay an additional one time charge, down from 20 cities in October 1993. Averaged over all 95 cities, the average connection charge was $\$ 0.23$ greater if touch-tone service was ordered. In most cities customers must still pay a separate monthly charge for touch-tone service. However, the number of cities with separate monthly charges for touch-tone is decreasing along with the average amount. In October 1987, 91 cities charged separately for touch-tone; by October 1995 this number was down to 42. The average monthly charge has fallen from $\$ 1.52$ to $\$ 0.48$ over the same period.

## 3. Business Rates for Local Service

Local business rates were collected for the same 95 cities for which residential rates were collected, and averages were calculated using the same weights. Different companies use different classification systems for the types of access service offered to businesses. In some areas, there is a single rate for all business customer access lines. In many areas, however, there are separate rates for single business lines -- often termed "B-1" lines -- and for lines used by larger customers. The tariffs may distinguish "Key", "Multi-Line", "Complex wire", "PBX", or "Trunk" type access lines. Some companies limit the number of B-1 lines that a customer can have at the same location.

The majority of businesses use a single telephone line. However, these businesses account for only $10 \%$ to $20 \%$ of the access lines provided to businesses. Most lines are used by larger businesses who take two or more lines. These businesses must pay the multi-line federal subscriber line charge, which is higher than the residential and single-line business charge. Another difference between single line and multi-line customers is that multi-line customers generally want their lines to "hunt" or "rotary". This feature ensures that calls to a busy line will be switched automatically to a free line. There is an added charge for this feature in some areas.

Tables 3A, 3B, and 3C present business rate averages as of October 15, 1995. Businesses in many cities are required to take either measured or message rate service. The tables show estimates for "representative" service. This is the rate for unlimited service in the 53 cities where it is available, and the measured rate with 200 calls per line in the other 42 cities. Weighted averages are also shown for unlimited calling rates, and for measured or message service rates.

Tables 3A, 3B, and 3C show rates for a single-line business customer, for a Key system customer, and for a PBX customer. The Key and PBX rates include hunt group. If rates varied with the number of lines, the Key and PBX rates for the third line were used. Most cities did not have a separate Key system rate. The single-line rate was used if customers with Key systems were allowed to use multiple single lines. The PBX trunk rates were used if Key system customers were required to use PBX trunks. The recurring charges are shown on a per line basis. The Key system and PBX system connection charges shown in Tables 3B and 3C are the total charges for connecting three lines at the same time.

| Table 3ANational Averages for Local Single-line Business Rates ${ }^{3}$ |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Rates as of October 15 |  |  |  |  |  |  |
|  | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| Representative Service charge ${ }^{4}$ | \$31.06 | \$30.97 | \$32.29 | \$32.45 | \$32.70 | \$32.25 | \$32.46 |
| Subscriber Line Charges | 3.55 | 3.57 | 3.57 | 3.56 | 3.57 | 3.57 | 3.57 |
| Extra for Touch-tone | 2.43 | 2.35 | 1.84 | 1.71 | 1.67 | 1.21 | 0.97 |
| Tax including 911 charges | 4.21 | 4.32 | 4.42 | 4.57 | 4.63 | 4.61 | 4.77 |
| Total monthly charge | 41.25 | 41.21 | 42.12 | 42.29 | 42.57 | 41.64 | 41.77 |
| Number of cities in the sample offering Unlimited Service | 59 | 56 | 54 | 54 | 54 | 53 | 53 |
| Unlimited Service base rate | 33.04 | 33.29 | 34.12 | 34.06 | 34.85 | 34.39 | 34.48 |
| Subscriber Line Charges | 3.65 | 3.69 | 3.70 | 3.70 | 3.70 | 3.70 | 3.69 |
| Extra for Touch-tone | 2.12 | 2.11 | 1.87 | 1.84 | 1.76 | 1.12 | 1.00 |
| Tax including 911 charges | 4.90 | 4.98 | 5.22 | 5.34 | 5.50 | 5.36 | 5.51 |
| Total monthly charge | 43.71 | 44.07 | 44.91 | 44.94 | 45.81 | 44.57 | 44.68 |
|  |  |  |  |  |  |  |  |
| Number of cities in the sample offering Measured Service | 83 | 83 | 84 | 84 | 84 | 87 | 87 |
| Measured Service base rate | 16.18 | 16.17 | 16.76 | 16.55 | 16.60 | 16.74 | 17.11 |
| 200 five minute business day calls | 16.11 | 16.19 | 16.70 | 17.23 | 17.57 | 17.38 | 17.08 |
| Subscriber Line Charges | 3.54 | 3.55 | 3.55 | 3.54 | 3.55 | 3.55 | 3.54 |
| Extra for Touch-tone | 2.48 | 2.39 | 1.87 | 1.73 | 1.68 | 1.22 | 0.98 |
| Tax including 911 charges | 4.41 | 4.53 | 4.56 | 4.77 | 4.86 | 4.83 | 5.00 |
| Total monthly charge | 42.72 | 42.83 | 43.44 | 43.82 | 44.26 | 43.72 | 43.71 |
| Additional local five-minute call | 0.093 | 0.093 | 0.091 | 0.093 | 0.094 | 0.092 | 0.091 |
| Inside wiring maintenance |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Rotary connection charge | 71.05 | 71.36 | 72.75 | 72.55 | 71.41 | 69.88 | 67.87 |
| Extra for Touch-tone | 1.70 | 1.89 | 1.13 | 1.19 | 1.17 | 0.92 | 0.27 |
| Tax | 4.06 | 4.15 | 4.32 | 4.33 | 4.25 | 4.13 | 4.18 |
| Total charge | 76.81 | 77.40 | 78.20 | 78.07 | 76.83 | 74.93 | 72.32 |
| Additional charge if drop line and connection block are needed | 5.92 | 7.87 | 6.90 | 6.83 | 6.64 | 6.49 | 7.28 |

[^3]| Table 3B <br> Nationwide Averages for a Local Key System Business Line ${ }^{5}$ |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Rates as of October 15 |  |  |  |  |  |  |
|  | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| Representative Service charge ${ }^{6}$ | \$37.19 | \$36.81 | \$37.03 | \$37.27 | \$37.23 | \$37.01 | \$36.56 |
| Subscriber Line Charges | 4.87 | 4.98 | 4.85 | 4.78 | 5.32 | 5.45 | 5.59 |
| Extra for Touch-tone | 2.65 | 2.49 | 1.94 | 1.82 | 1.75 | 1.22 | 1.02 |
| Tax including 911 charges | 5.18 | 5.21 | 5.12 | 5.28 | 5.36 | 5.35 | 5.49 |
| Total monthly charge | 49.89 | 49.49 | 48.94 | 49.15 | 49.66 | 49.03 | 48.66 |
| \# cities offering Unlimited Service | 59 | 56 | 54 | 54 | 54 | 53 | 53 |
| Unlimited Service base rate | 44.84 | 44.80 | 44.40 | 44.49 | 44.61 | 44.96 | 43.55 |
| Subscriber Line Charges | 5.65 | 5.68 | 5.55 | 5.52 | 6.01 | 6.16 | 6.17 |
| Extra for Touch-tone | 2.25 | 2.15 | 1.87 | 1.84 | 1.76 | 1.13 | 1.11 |
| Tax including 911 charges | 6.77 | 6.68 | 6.65 | 6.78 | 6.92 | 6.86 | 6.92 |
| Total monthly charge | 59.51 | 59.31 | 58.47 | 58.63 | 59.30 | 59.11 | 57.75 |
| \# cities offering Measured Service | 77 | 77 | 78 | 78 | 78 | 81 | 81 |
| Measured Service base rate | 20.38 | 20.55 | 19.93 | 19.49 | 19.56 | 19.89 | 20.35 |
| Cost of 2005 -minute business-day calls | 16.01 | 16.10 | 16.89 | 17.44 | 17.80 | 17.60 | 17.29 |
| Subscriber Line Charges | 4.78 | 4.89 | 4.75 | 4.67 | 5.23 | 5.38 | 5.52 |
| Extra for Touch-tone | 2.77 | 2.59 | 1.99 | 1.86 | 1.77 | 1.22 | 1.00 |
| Tax including 911 charges | 4.93 | 5.10 | 4.91 | 5.06 | 5.18 | 5.18 | 5.36 |
| Total monthly charge | 48.87 | 49.23 | 48.47 | 48.52 | 49.54 | 49.27 | 49.52 |
| Additional local five-minute call | 0.093 | 0.094 | 0.091 | 0.093 | 0.095 | 0.093 | 0.091 |
| Connection charge for three rotary lines | 166.89 | 165.13 | 178.14 | 178.25 | 169.47 | 170.49 | 168.05 |
| Extra for Touch-tone | 5.10 | 5.68 | 3.40 | 3.39 | 3.34 | 2.75 | 0.81 |
| Tax | 9.43 | 9.30 | 9.67 | 9.61 | 8.95 | 9.02 | 9.86 |
| Total charge for three lines | 181.42 | 180.11 | 191.21 | 191.25 | 181.76 | 182.26 | 178.72 |
| Additional charges for three lines if drop lines and connection blocks are needed | 13.39 | 14.09 | 20.79 | 12.76 | 12.20 | 10.90 | 11.69 |

[^4]| Table 3C <br> Nationwide Averages for a Local PBX Business Trunk ${ }^{7}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Rates as of October 15 |  |  |  |  |  |
|  | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| Representative Service charge ${ }^{8}$ | \$39.24 | \$40.97 | \$41.05 | \$40.81 | \$39.89 | \$40.21 |
| Subscriber Line Charges | 4.98 | 4.85 | 4.78 | 5.32 | 5.45 | 5.59 |
| Extra for Touch-tone | 3.29 | 2.66 | 2.47 | 2.36 | 1.74 | 1.39 |
| Tax including 911 charges | 5.63 | 5.69 | 5.88 | 5.93 | 5.82 | 6.03 |
| Total monthly charge | 53.14 | 54.17 | 54.18 | 54.42 | 52.90 | 53.22 |
| \# cities offering Unlimited Service | 56 | 54 | 54 | 54 | 53 | 53 |
| Unlimited Service base rate | 49.40 | 51.54 | 51.28 | 51.21 | 51.20 | 51.38 |
| Subscriber Line Charges | 5.68 | 5.55 | 5.52 | 6.01 | 6.16 | 6.17 |
| Extra for Touch-tone | 3.29 | 2.66 | 2.47 | 2.36 | 1.74 | 1.39 |
| Tax including 911 charges | 7.44 | 7.69 | 7.89 | 8.01 | 7.85 | 8.07 |
| Total monthly charge | 65.81 | 67.44 | 67.16 | 67.59 | 66.95 | 67.01 |
| \# cities offering Measured Service | 77 | 78 | 78 | 78 | 81 | 81 |
| Measured Service base rate | 20.53 | 21.00 | 20.76 | 20.65 | 20.20 | 20.61 |
| 200 five-minute business-day calls | 16.10 | 16.57 | 17.18 | 17.55 | 17.34 | 17.03 |
| Subscriber Line Charges | 4.89 | 4.75 | 4.67 | 5.23 | 5.38 | 5.52 |
| Extra for Touch-tone | 3.41 | 2.69 | 2.47 | 2.34 | 1.72 | 1.33 |
| Tax including 911 charges | 5.16 | 5.04 | 5.22 | 5.32 | 5.21 | 5.37 |
| Total monthly charge | 50.09 | 50.05 | 50.30 | 51.09 | 49.85 | 49.86 |
| Additional local five-minute call | 0.094 | 0.089 | 0.091 | 0.092 | 0.090 | 0.089 |
| Connection charge for three rotary lines | 164.60 | 178.28 | 178.39 | 169.60 | 170.33 | 167.04 |
| Extra for Touch-tone | 5.51 | 3.22 | 3.39 | 3.34 | 2.75 | 0.81 |
| Tax | 9.20 | 9.65 | 9.61 | 8.95 | 9.01 | 9.85 |
| Total charge for three lines | 179.31 | 191.15 | 191.39 | 181.89 | 182.09 | 177.70 |
| Additional charges for three lines if drop lines and connection blocks are needed | 14.09 | 20.79 | 12.58 | 12.20 | 10.90 | 11.69 |

[^5]As of October 1995, the average bill for "representative" single-line service was $\$ 32.46$ for the access line and message units, $\$ 3.57$ for federal and state subscriber line charges, $\$ 0.97$ for touch-tone service, and $\$ 4.77$ for taxes and 911 charges, for a total average charge of $\$ 41.77$.

The average bill for a "representative" Key system customer was $\$ 36.56$ (per line) for the access line and message units, $\$ 5.59$ for federal and state subscriber line charges, $\$ 1.02$ for touch-tone service, and $\$ 5.49$ for taxes and 911 charges. The total representative charge was $\$ 48.66$ per line.

The average bill for a "representative" PBX system customer was $\$ 40.21$ (per line) for the access line and message units, $\$ 5.59$ for federal and state subscriber line charges, $\$ 1.39$ for touch-tone service, and $\$ 6.03$ for taxes and 911 charges. The total representative charge was $\$ 53.22$ per line. PBX customers typically have 5 to 10 stations for each trunk line. Some PBX customers request direct inward dial capability. This enables each station to have a telephone number. Thus, a customer with 50 trunks might have 300 stations. PBX customers with direct inward dial typically pay $\$ 5$ to $\$ 10$ per month for each block of 20 numbers.

Businesses can take local access service with unlimited local calling in 53 of the 95 sample cities. In these cities, the October 1995 average monthly charge for single-line business was $\$ 44.68$, including SLCs, touch-tone calling, and taxes. Businesses in the other 42 cities are required to take some form of measured service. In 45 cities, single-line businesses have the option of taking either unlimited or measured service. Single-line measured service is available in Texas, but multi-line measured service is not offered there. Thus, measured service is available to single-line businesses in 87 sample cities, and to multi-line businesses in 81 sample cities. The average recurring charge for singleline measured service was $\$ 17.11$ in October. In some cities the recurring charge includes an allowance for some calling. Including these allowances, single-line businesses would pay an average of $\$ 17.08$ for the first 200 five minute day time calls. Including SLCs, touch-tone calling, and taxes, the average charge would be $\$ 43.71$.

The connection charge for a single touch-tone business line averaged $\$ 72.32$, including taxes. Key and PBX customers adding a single line would pay a similar amount. In many cities, however, the telephone company has a lower connection charge for additional lines on the same service order. The total connection charge for three Key system lines, with hunting, was $\$ 178.72$. The total connection charge for three PBX system lines, with hunting, was $\$ 177.70$. As with residential service, there may be an additional charge if a drop line and connection block must be installed as part of connection.

## 4. Lifeline Rates

The local rate averages shown in Table 2 are based on rates that are available to all customers. Many states have programs that subsidize monthly service charges or connection fees paid by low-income households. Most of these programs are part of the FCC sponsored lifeline and Link-Up programs. As of October 1995, assistance for monthly service charges was offered in 70 of the 95 sample cities, representing $73 \%$ of the urban consumers. Connection assistance was offered in 90 of the 95 sample cities representing $96 \%$ of urban consumers. Carriers in 66 of the sample cities, representing $70 \%$ of urban consumers, offered both types of assistance programs.

Table 4 summarizes data for subsidized monthly rates and connection charges. The first column shows nationwide average charges for unsubsidized service. The second column shows the average unsubsidized charges in the cities where subsidized service is offered. The third column shows the weighted average for lifeline and Link-Up charges. These rates reflect benefits from both federal and state telephone assistance plans. For example, the Link-Up program covered half of the normal connection charge in Ameritech regions of Ohio and Wisconsin. State plans covered the balance of the connection charges. In a few cities, customers could not obtain unlimited calling service as part of the lifeline program. An equivalent amount for an unlimited calling rate was calculated as the measured service recurring rate plus the charge for 100 five minute day time calls.

The final column in Table 4 shows the average benefit in cities where assistance plans were offered. Enrolled customers who had private line service and unlimited calling received an average benefit of $\$ 9.06$ per month. This benefit includes reductions in the basic rate, the subscriber line charges, and taxes. Customers taking the least expensive service received an average benefit of $\$ 7.82$ per month. Monthly benefits exceeded $\$ 7$ per month in 62 of the 70 cities that had a subsidy plan. Customers who qualified for LinkUp assistance received an average benefit of $\$ 26.66$ in the form of a reduced connection charge.

Appendix 2 shows the total charge for private line rotary service with unlimited calling, including SLCs, surcharges, and taxes, for each of the 95 cities in the sample. The appendix also shows the total charge for the most comparable lifeline or subsidized rate service. In some cases this is the charge for measured service with 100 five minute daytime same zone calls. The appendix also shows the connection charge for rotary service, including surcharges and taxes, and the comparable cost under the Link-Up or subsidized connection charge program. Blank spaces in Appendix 2 indicate cities where a subsidized rate is not available. Subsidized connection charges of $\$ 0.00$ in Ohio and Wisconsin reflect the fact that there are no connection charges for customers who qualify for assistance.

| Table 4 <br> Comparison of Generally Available Rates to Subsidized Rates <br> (October 1995) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Generally Available Rates |  | Subsidy Plan Rate <br> (c) | Benefit(b) - (c) |
|  | National Average (a) | Cities with Subsidy Plan <br> (b) |  |  |
| Unlimited local calling | \$13.62 | \$13.84 | \$8.99 |  |
| Federal and state SLCs | 3.54 | 3.47 | 0.23 |  |
| Taxes and 911 charges | 2.34 | 2.31 | 1.34 |  |
| Total for rotary service | 19.49 | 19.62 | 10.56 | 9.06 |
| Lowest generally available rate | 6.68 | 6.61 | 2.87 |  |
| Federal and state SLCs | 3.54 | 3.47 | 0.23 |  |
| Taxes and 911 charges | 1.56 | 1.49 | 0.65 |  |
| Total for rotary service | 11.79 | 11.57 | 3.75 | 7.82 |
| Minimum connection charge | 40.91 | 41.01 | 15.86 |  |
| Taxes | 2.42 | 2.51 | 1.00 |  |
| Total for rotary service | 43.33 | 43.52 | 16.86 | 26.66 |

Subsidized monthly service rate averages are for the 70 cities with subsidized monthly rates.
These cities represent $73 \%$ of the sample weight.
Subsidized connection charge averages are for the 90 cities with connection assistance plans.
These cities represent $96 \%$ of the sample weight.
Both type of assistance programs were offered in 66 of the sample cities.

Appendix 2 shows lifeline rates in Wisconsin that are the same as the normal charge. All Wisconsin Bell customers are required to take message service. The lifeline benefit in Wisconsin consists of a slight reduction in the message charge after the customer has already made 150 calls in a month. Thus, the lifeline charge would be the same as the normal charge for customers making 100 calls in the month.

Southwestern Bell has two plans that offer subsidized monthly rates in Texas. One plan offers significantly greater benefits than the other plan, but has very strict eligibility requirements. The newer plan has lower benefits, but more liberal eligibility requirements. Southwestern Bell expects much greater participation in the new plan. The rates for this newer plan are shown in Appendix 2.

## 5. Rural Telephone Service

Rural telephone service has several distinctive features. Rural service is often provided by cooperatives or small companies that do not serve large metropolitan areas. Local exchanges in rural areas often cover a large geographic area with low population density. Rural carriers frequently have no large business accounts. They also commonly have a higher percentage of toll and access revenues than do large carriers which serve urban areas. Many rural carriers serve a single exchange, and so cannot average rates over multiple exchanges. This last attribute means that rates may be relatively low in areas with older plant, and then may jump significantly the year a rural carrier replaces its central office switch.

Data presented in Section 6, Table 8A, show that rural households spent an average of $\$ 642$ for telephone service in 1994, compared with an average of $\$ 698$ for urban households. However, rural households devote the same percentage of overall expenditures to telephone service as urban households. Over the past few years, telephone expenditures by rural households have grown faster than telephone expenditures by urban households. This section examines available data on rural telephone rates.

The Bureau of Labor Statistics telephone service price indices do not provide adequate indicators of rural telephone service rate changes. The consumer price indices reflect changes in prices paid by urban consumers. Urban consumers are those persons living in Metropolitan Statistical Areas (MSAs) and other urbanized places with populations of at least 2500. More than four out of five Americans live in urban areas. The CPI local rate sample does not include quotes for service provided to non-urban areas.

The Producer Price Index local service sample covers the statewide operations of several local exchange companies. Thus, the PPI local service indices cover some rural operations. However, it is unlikely that the PPI sample includes many small rural telephone companies, since the sample is small, and the probability of selection was based on company revenues. The rural rates charged by larger multi-exchange carriers are not necessarily representative of the rates charged by small rural carriers. Multiexchange carriers typically have local service tariffs that specify rate bands based on exchange size. Since rural exchanges tend to be small, the large carriers generally charge lower rates in rural areas than they do in urban areas. Their rates, however, tend to be based on statewide costs. Small rural carriers, by contrast, often serve a single exchange. Their rates may be closely tied to local factors. Thus, the CPI and PPI local service indices are better indicators of price changes in urban areas than in rural areas.

Relatively little rate data has been compiled for rural carriers. In 1982, The Rural Utilities Service (RUS), formerly the Rural Electrification Administration, conducted a special study for the Office of Management and Budget. Rate information was collected for some 1100 companies in 1972 and for more than 1300 companies in 1982. Over the ten year period, residential rural rates rose by about $39.6 \%$, compared with a $58.5 \%$
increase in the PPI local residential service index. In 1982, the residential rate averages were $\$ 8.12$ for small private systems, $\$ 8.87$ for cooperatives, $\$ 9.78$ for exchanges owned by holding companies and $\$ 11.58$ for municipal systems. Over the prior ten years, however, rates in municipal systems increased at a much slower rate than the rates of other rural systems.

The average rate for all rural companies was $\$ 6.16$ in 1972 and $\$ 8.60$ in 1982. Appendix 6 contains nationwide averages for local residential rates -- $\$ 6.38$ for 1972 and $\$ 10.18$ for 1982 . This suggests that the average residential rate was about $\$ 1.50$ per month lower in rural areas, compared with the national average in 1982.

Local exchange carriers file their local service tariffs with state public utility commissions. Wisconsin has an unusually large number of telephone companies, many of which serve rural exchanges. At one time the Wisconsin Public Service Commission compiled rate averages based on exchange size. Table 5 shows the number of exchanges in Wisconsin for selected size categories. The table also shows one party residential rates for three size categories. The data shows several patterns that may be typical for many states. The number of very small exchanges -- those with less than 2,000 stations -- has declined over time. The number of large exchanges -- those with more than 25,000 stations -- has increased over time. Table 5 also shows that rates in the smallest exchanges are generally lower than rates in the largest exchanges. Rates remained fairly constant from 1986 through 1990. The averages for the smallest exchanges rose slightly, while the averages for larger exchanges fell by about $5 \%$. The Wisconsin commission staff has not compiled comparable rate averages in recent years.

Some caution must be used interpreting the rates shown in Table 5. The rates shown in the table represent medians through 1985, and averages thereafter. As can be seen by looking at Table 7, there are differences between average values and median values. The sharp increase between 1985 and 1986 can be explained by this change. In addition, some differences over time are due to movement of exchanges between groups.

Even if data were available for Wisconsin exchanges starting 1993, the rate averages would not be comparable to the averages published for prior years. Local rate structures changed significantly in Wisconsin in 1993. Most companies dramatically increased the charge for local service, greatly enlarged the sizes of local exchanges, and converted from unlimited calling to measured service for calls outside the immediate exchange. Calls that were formerly carried at intrastate toll rates are now carried at the five cents per minute local rate. Thus, the increase in local service rates should be offset by the decrease in intrastate toll charges.

| Table 5 <br> Exchange Size and Rates in Wisconsin ${ }^{9}$ |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of Exchanges with |  |  |  | Total Number of Exchanges | One Party Residential Rate for Exchanges with |  |  |
|  | $\begin{gathered} \hline \text { fewer } \\ \text { than } \\ 2,000 \\ \text { stations } \\ \hline \end{gathered}$ | $\begin{gathered} 2,001 \text { to } \\ 10,000 \\ \text { stations } \end{gathered}$ | 10,001 to 25,000 stations | $\begin{array}{\|c} \text { more than } \\ 25,000 \\ \text { stations } \end{array}$ |  | fewer than 2,000 stations | $\begin{gathered} 10,001 \\ \text { to } 25,000 \\ \text { stations } \end{gathered}$ | $\begin{aligned} & \text { more than } \\ & 25,000 \\ & \text { stations } \end{aligned}$ |
| 1972 | 132 | 319 | 68 | 86 | 605 | \$5.46 | \$6.72 | \$6.50 |
| 1973 | 130 | 312 | 72 | 91 | 605 | 5.58 | 6.90 | 6.95 |
| 1974 | 116 | 322 | 81 | 83 | 602 | 5.57 | 7.00 | 7.40 |
| 1975 | 107 | 327 | 82 | 86 | 602 | 5.55 | 7.02 | 7.03 |
| 1976 | 95 | 337 | 80 | 92 | 604 | 5.49 | 7.97 | 7.89 |
| 1977 | 92 | 328 | 76 | 105 | 601 | 5.77 | 8.30 | 8.15 |
| 1978 | 95 | 324 | 72 | 110 | 601 | 6.44 | 8.38 | 8.90 |
| 1979 | 83 | 330 | 81 | 104 | 598 | 5.94 | 8.13 | 9.50 |
| 1980 | 78 | 322 | 86 | 108 | 594 | 6.05 | 8.10 | 10.09 |
| 1981 | 73 | 319 | 92 | 110 | 594 | 6.40 | 8.75 | 10.25 |
| 1982 | 71 | 319 | 94 | 110 | 594 | 6.50 | 9.95 | 10.50 |
| 1983 | 67 | 318 | 98 | 110 | 593 | 7.60 | 11.95 | 12.77 |
| 1984 | 67 | 311 | 98 | 117 | 593 | 8.70 | 16.95 | 16.78 |
| 1985 | 63 | 311 | 98 | 121 | 593 | 8.20 | 15.30 | 15.65 |
| 1986 | 63 | 311 | 98 | 121 | 593 | 9.02 | 13.71 | 14.73 |
| 1987 | 61 | 306 | 104 | 122 | 593 | 9.00 | 13.47 | 14.20 |
| 1988 | 61 | 307 | 102 | 123 | 593 | 9.10 | 13.46 | 14.27 |
| 1989 | 60 | 300 | 106 | 127 | 593 | 8.77 | 13.27 | 14.19 |
| 1990 | 57 | 300 | 107 | 129 | 593 | 9.14 | 13.18 | 14.01 |

Based on data compiled by the Wisconsin Public Service Commission. The rate levels represent medians through 1985 and include the lease of a telephone. Starting in 1986, the rates represent averages and exclude equipment, subscriber line charges, and inside wiring maintenance plans. The rates include extended area charges.

Recently, RUS began collecting rate information from their borrowers. RUS requires borrowers to submit Form 479 that contains details of the firm's operations. Borrowers are asked to report the single party residential rate and the single-line business rate for each of their exchanges. The reported rates do not include subscriber line charges, surcharges, or taxes. The Industry Analysis Division has taken these rates and constructed state-by-state weighted averages and a national weighted average for 1994. The national average residential rate for RUS borrowers was $\$ 11.05$ and the single-line business rate was $\$ 20.88$ in 1994. This compares with the Urban Rates Survey averages of \$13.28 and \$32.25 in 1994.

As previously mentioned, great care must be taken when comparing the rates of small rural carriers to those of larger urban carriers. Many RUS borrowers own fewer than five exchanges. Consequently, calls outside of the borrowers' small franchise territories are commonly toll calls. Therefore, the effective telephone rate for many of the firms' subscribers may be higher than indicated. Map 1 compares the RUS borrowers' average residential rates in each state to the national average residential rate of RUS borrowers. Map 2 compares single-line business rates in a similar manner. Table 6 presents the state-by-state averages of the rates of RUS borrowers in 1994. In addition to state-bystate averages, table 6 presents a composite average rate per access line consisting of an average of business and residential rates weighted by the number of business and residential subscribers. This average was $\$ 12.86$ in 1994. Since these firms provide a very small percentage of the access lines in many states, the averages presented in table 6 do not represent average rates paid by all customers in a state. The percentage of access lines provided by RUS borrowers in each of the states is also included in table 6. Overall, RUS borrowers provide slightly over 4\% of the nation's access lines.

RUS revenue data also provides an indirect means of assessing changes in rural rate levels. Table 7 provides revenue per subscriber data from the annual volumes of Statistical Report, Rural Telephone Borrowers, U.S. Department of Agriculture Publication 300-4. The table shows revenue per subscriber for local service and for net toll and access services. The data are for both residential and business customers. The local service figures do not include revenue from subscriber line charges. Subscriber line charge revenue is included with net toll and access. The table shows data for all rural borrowers, and for borrowers with 1 to 499 subscribers.

The RUS revenue data suggests that, on average, local rate increases in rural areas have been similar to increases nationwide.

Map 1

Average Residential Rates of RUS Borrowers by State in 1994


Map 2

Average Business Rates of RUS Borrowers by State in 1994


Table 6
Average Rates* for RUS Borrowers by State in 1994

| State | Average Single-line Business Rate | Average Residential Rate | Average Rate per Access Line | Percentage of State's Access Lines |
| :---: | :---: | :---: | :---: | :---: |
| Alabama | \$24.88 | \$12.42 | \$14.41 | 7.72\% |
| Alaska | \$24.23 | \$14.09 | \$17.37 | 32.99\% |
| Arizona | \$20.78 | \$9.43 | \$11.88 | 3.15\% |
| Arkansas | \$22.29 | \$9.85 | \$12.03 | 13.85\% |
| California | \$24.87 | \$14.53 | \$16.32 | 0.35\% |
| Colorado | \$22.40 | \$13.89 | \$15.86 | 1.70\% |
| Florida | \$22.32 | \$8.79 | \$11.46 | 1.70\% |
| Georgia | \$24.00 | \$12.32 | \$14.41 | 9.51\% |
| Idaho | \$20.92 | \$11.81 | \$13.76 | 3.60\% |
| Illinois | \$13.58 | \$9.54 | \$10.07 | 0.71\% |
| Indiana | \$21.68 | \$14.49 | \$15.83 | 17.24\% |
| lowa | \$10.99 | \$8.48 | \$8.94 | 6.45\% |
| Kansas | \$9.78 | \$6.78 | \$7.36 | 5.69\% |
| Kentucky | \$17.00 | \$10.86 | \$11.69 | 8.78\% |
| Louisiana | \$27.46 | \$14.91 | \$16.86 | 5.65\% |
| Maine | \$15.25 | \$9.22 | \$10.02 | 5.18\% |
| Maryland | \$9.00 | \$6.00 | \$6.51 | 0.18\% |
| Massachusetts | \$23.28 | \$12.21 | \$13.63 | 0.07\% |
| Michigan | \$13.40 | \$8.07 | \$8.85 | 2.17\% |
| Minnesota | \$16.81 | \$10.35 | \$11.32 | 8.09\% |
| Mississippi | \$22.89 | \$14.02 | \$15.29 | 6.03\% |
| Missouri | \$11.91 | \$6.91 | \$7.74 | 3.70\% |
| Montana | \$20.23 | \$10.70 | \$12.54 | 12.88\% |
| Nebraska | \$16.62 | \$9.84 | \$11.15 | 8.83\% |
| Nevada | \$14.92 | \$10.95 | \$12.04 | 0.82\% |
| New Hampshire | \$16.62 | \$7.95 | \$9.61 | 3.42\% |
| New Jersey | \$15.50 | \$7.80 | \$10.04 | 3.09\% |
| New Mexico | \$20.79 | \$13.76 | \$15.31 | 3.42\% |
| New York | \$14.62 | \$8.60 | \$9.58 | 1.17\% |
| North Carolina | \$26.77 | \$11.38 | \$14.07 | 7.76\% |
| North Dakota | \$13.21 | \$9.76 | \$10.50 | 14.91\% |
| Ohio | \$24.23 | \$15.47 | \$16.71 | 0.40\% |
| Oklahoma | \$16.42 | \$10.23 | \$11.36 | 9.77\% |
| Oregon | \$14.66 | \$10.02 | \$10.95 | 3.75\% |
| Pennsylvania | \$19.95 | \$10.10 | \$12.09 | 9.05\% |
| South Carolina | \$22.24 | \$10.81 | \$13.17 | 12.07\% |
| South Dakota | \$12.66 | \$7.53 | \$8.52 | 14.55\% |
| Tennessee | \$27.33 | \$11.51 | \$14.13 | 9.10\% |
| Texas | \$25.49 | \$10.08 | \$13.18 | 3.55\% |
| Utah | \$19.78 | \$10.51 | \$12.37 | 1.94\% |
| Vermont | \$21.27 | \$9.54 | \$11.89 | 4.15\% |
| Virginia | \$21.67 | \$11.06 | \$12.48 | 7.64\% |
| Washington | \$21.54 | \$11.88 | \$13.90 | 1.34\% |
| West Virginia | \$34.77 | \$21.56 | \$23.40 | 3.42\% |
| Wisconsin | \$21.96 | \$11.75 | \$13.53 | 13.36\% |
| Wyoming | \$17.26 | \$10.69 | \$12.55 | 6.03\% |
| National Average | \$20.88 | \$11.05 | \$12.86 | 4.11\% |

* Average rates do not include subscriber line charges, surcharges, taxes, or 911 charges

| Table 7 <br> Revenue per Subscriber for RUS Borrowers ${ }^{10}$ |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Median: All Borrowers |  |  | Average: All Borrowers |  |  | Median: Borrowers with less than 500 Subscribers |  |  |
|  | Local Service | $\begin{array}{\|l\|} \hline \text { Net Toll } \\ \text { and } \\ \text { Access } \\ \hline \end{array}$ | Total ${ }^{11}$ | Local Service | $\begin{array}{\|c\|} \hline \text { Net Toll } \\ \text { and } \\ \text { Access } \\ \hline \end{array}$ | Total ${ }^{11}$ | Local Service | Net Toll and Access | Total ${ }^{11}$ |
| 1972 | \$80.76 | \$75.13 | \$155.89 | NA | NA | NA | \$76.56 | \$84.84 | \$161.40 |
| 1973 | 85.04 | 84.25 | 169.29 | NA | NA | NA | 79.61 | 91.88 | 171.49 |
| 1974 | 89.65 | 99.51 | 189.16 | \$99.73 | \$119.84 | \$219.57 | 83.37 | 105.39 | 188.76 |
| 1975 | 94.45 | 110.49 | 204.94 | 107.02 | 133.53 | 240.55 | 88.97 | 116.72 | 205.69 |
| 1976 | 100.75 | 121.09 | 221.84 | 114.93 | 151.54 | 266.47 | 92.36 | 130.64 | 223.00 |
| 1977 | 108.49 | 133.93 | 242.42 | 124.58 | 168.06 | 292.64 | 94.60 | 139.31 | 233.91 |
| 1978 | 116.25 | 153.93 | 270.18 | 134.75 | 193.17 | 327.92 | 101.48 | 159.59 | 261.07 |
| 1979 | 121.47 | 174.72 | 296.19 | 143.96 | 224.25 | 368.21 | 106.99 | 185.85 | 292.84 |
| 1980 | 126.62 | 190.05 | 316.67 | 152.17 | 250.21 | 402.38 | 112.74 | 193.55 | 306.29 |
| 1981 | 134.94 | 223.65 | 358.59 | 162.09 | 293.64 | 455.73 | 121.63 | 218.86 | 340.49 |
| 1982 | 143.27 | 272.46 | 415.73 | 175.62 | 337.81 | 513.43 | 126.93 | 261.21 | 388.14 |
| 1983 | 147.89 | 312.08 | 459.97 | 186.33 | 370.89 | 557.22 | 127.80 | 320.47 | 448.27 |
| 1984 | 152.25 | 346.03 | 498.28 | 191.71 | 402.18 | 593.89 | 132.75 | 326.77 | 459.52 |
| 1985 | 156.36 | 363.62 | 519.98 | 197.73 | 426.57 | 624.30 | 138.30 | 371.75 | 510.05 |
| 1986 | 157.75 | 397.92 | 555.67 | 197.01 | 433.48 | 630.49 | 149.97 | 426.41 | 576.38 |
| 1987 | 151.84 | 425.42 | 577.26 | 189.98 | 446.67 | 636.65 | 141.41 | 486.74 | 628.15 |
| 1988 | 148.92 | 427.49 | 576.41 | 182.68 | 456.00 | 638.68 | 139.82 | 493.78 | 633.60 |
| 1989 | 145.87 | 444.99 | 590.86 | 184.83 | 480.19 | 665.02 | 136.64 | 503.15 | 639.79 |
| 1990 | 149.69 | 459.78 | 609.47 | 191.10 | 496.64 | 687.74 | 137.72 | 539.79 | 677.51 |
| 1991 | 149.75 | 466.68 | 616.43 | 190.61 | 500.82 | 691.43 | 137.77 | 573.44 | 711.21 |
| 1992 | 152.87 | 520.53 | 673.40 | 195.07 | 518.67 | 713.74 | 136.81 | 688.87 | 825.68 |
| 1993 | 157.14 | 556.70 | 713.84 | 198.74 | 535.23 | 733.97 | 152.60 | 807.40 | 960.00 |
| 1994 | 164.85 | 584.07 | 748.92 | 206.74 | 541.88 | 748.62 | NA | NA | NA |
| 1995 | 170.37 | 604.13 | 774.50 | 212.17 | 546.37 | 758.54 | 156.03 | 953.43 | 1109.46 |
|  | Average annual rate of growth over the period |  |  |  |  |  |  |  |  |
|  | 3.3\% | 9.5\% | 7.2\% | 3.7\% | 7.5\% | 6.1\% | 3.1\% | 11.1\% | 8.7\% |
|  | Average annual rate of growth over the period if Federal Subscriber Line charges are treated as local service revenue |  |  |  |  |  |  |  |  |
|  | 4.3\% | 9.1\% | 7.2\% | 4.6\% | 7.1\% | 6.1\% | 4.2\% | 10.9\% | 8.7\% |

[^6]Figure 11
Average Monthly Local Service Revenue per Line for all RUS Borrowers


Figure 11 shows the average local service revenue per subscriber per month. The revenue per month averages are higher than the average level of residential rates because the data includes business customers, because some subscribers have multiple access lines, and because rural carriers may have revenue from premium local services, such as touch-tone service and call waiting. Since the local revenue figures do not include subscriber line charges, the graph also shows the monthly revenue per line with the residential subscriber line charge added to it. For comparison, the graph also shows the discontinued PPI series for local service, rebased so the series start at the same value in 1974. The graph suggests that rural rates rose more rapidly than nationwide rates through 1980 and that they have been rising at a similar rate since then.

Figure 12 shows local service revenue per line for the smallest RUS exchanges, those with less than 500 subscribers. For comparison, the graph also shows the discontinued PPI series for local service, rebased so the series start at the same value in 1972. Taken together, Figure 11 and Figure 12 suggest that the percentage increases in local telephone service rates in rural areas have been similar to the percentage increases nationwide.

Figure 13
Average Annual Revenue per Line for all RUS Borrowers

$\square$ Toll and Other Network Access Revenue (SLC not included)
$\square$ Subscriber Line Charge Revenue

- Local Service Revenue

Telephone expenditures by rural households have risen faster than expenditures by urban households. The difference appears to be increased use of toll services, as indicated by the RUS data. Figure 13 shows local service revenues per subscriber as well as network access and toll revenues per subscriber. Annual subscriber line charges have been removed from the latter charges, and are shown separately. The figure shows that toll and access revenues per subscriber have grown rapidly since 1974. In contrast local service revenue per subscriber has grown little since 1986.

Figure 13 and table 7 show that RUS company revenue per line has grown rapidly since 1974. Most of the growth has come from toll service and access revenues. In 1974, local service revenues accounted for $45 \%$ of RUS company revenues. Even when federal subscriber line charges are included in local service revenue, that percentage has declined to $34 \%$ in 1995. Network access and toll revenues, even excluding federal subscriber line charges, grew by about $7.1 \%$ per year over that period. This reflects the sustained growth in toll calling and the resulting access charge revenue, as well as the growth in Universal Service Fund payments to high cost carriers.

## 6. Expenditures for Telephone Service

## a. Consumer Expenditures for Telephone Service

The BLS conducts surveys of consumer expenditures, in part, to develop weights for CPI indices. The surveys collect income, expenditure, and demographic information for "Consumer units". Consumer units are often referred to as households, but the definition is not identical to households, as defined by the Census Bureau. There were 100 million consumer units in 1993, compared with 98.8 million households. BLS uses two types of surveys: diary surveys - where household members record most types of purchases for a few weeks; and, interview surveys - where households are interviewed to determine their expenditures for the prior three months. Households selected for the interview survey are interviewed in five successive quarters.

Prior to 1984, BLS published separate expenditure estimates based on the diary and the interview surveys. Telephone expenditures were then collected only through the interview surveys, and average levels of telephone expenditures were published only in the interview summaries. BLS began publishing integrated estimates in 1984, combining information from both types of surveys. The integrated estimates are considered more reliable, and were used for most of the data shown in the following tables. The diary survey now collects telephone expenditures in a category labeled "Rent, utilities, phone, household fuel."

The BLS introduced another change in methodology in 1984. Expenditure data were not collected for rural households for 1980 through 1983. Nationwide expenditure data are available for 1984 through 1994. More than 80 percent of households are in urban areas, and the estimates of telephone expenditures by urban households are similar to estimates for nationwide average telephone expenditures. Nonetheless, 1980 through 1983 data are not completely comparable with subsequent data.

Several changes in the telephone industry make it difficult to interpret changes in the BLS estimates of household expenditures for telephone service. Prior to 1983, most residential telephones were leased from local exchange carriers. As a consequence of the FCC's Computer Inquiry II proceeding, telephone sets were detariffed on January 1, 1984. Existing tariffed equipment became known as "embedded rate base" and much of this equipment was sold "in place" to consumers. Significant amounts of equipment purchases were included on local telephone bills in 1983 and 1984. Telephone bills have not included significant amounts of equipment sales since that time. Bell System embedded rate base was transferred to AT\&T in 1984, but the lease payments were included in local telephone bills into 1987. AT\&T now directly bills customers for equipment lease charges.

The BLS has changed the consumer expenditure survey questionnaires to reflect changes in the equipment market. Beginning in 1982, the survey specifically included telephones and accessories in its list of home furnishings and related household items.

Amounts appearing on the telephone bills, however, were included as telephone service until 1986. Thus, the 1983 and 1984 estimates include the sale of the embedded base. The current questionnaire separates equipment sales from other items that appear on telephone bills. The questionnaire does not specifically address payments for leasing telephone equipment, commonly known as customer premises equipment (CPE). CPE lease payments may still be reported as telephone service expenditures.

The consumer expenditure survey continues to classify payments for inside wiring maintenance as part of telephone service. This probably accounts for between $\$ 10$ to $\$ 20$ of average annual household telephone expenditures. Beginning in 1991, consumers have been asked to separately identify cellular telephone payments. The BLS has not yet published a separate estimate for cellular telephone expenditures, but rather, continues to include these with other telephone expenditures.

The BLS survey requests both local and toll telephone expenditures. However, many respondents only provide a total bill, or provide inaccurate breakdowns of the local and toll components of the bill. Accordingly, the BLS only publishes a total telephone service expenditure estimate. The BLS is willing to furnish computer tapes that show local and toll expenditures for each household in the sample.

Table 8A shows expenditure data for all households or consumer units and demographic breakdowns of urban vs. rural and by census region. Table 8B shows expenditure data for demographic breakdowns by race and household income. Table 8C presents expenditure data broken down by age. The survey assigns a race and age to the household based on the race and age of the reference person, that is, the person who is identified as the head of the household. Tables 8A, 8B, and 8C also show telephone expenditures as a percentage of total household expenditures.

The average annual expenditures on telephone service by all households increased from $\$ 325$ in 1980 to $\$ 690$ in 1994. Telephone expenditures represented $2.2 \%$ of all household expenditures in 1994 and have remained fairly constant since 1980. As noted above, expenditure data from before 1984 did not cover rural areas, and may not be entirely consistent with current data.

| Table 8A <br> Annual Expenditures for Telephone Service by Selected Groups ${ }^{12}$ |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | All | Urban | Rural |  | Cens | gion |  |
|  | Consumers | Consumers | Consumers | Northeast | Midwest | South | West |
| Average Expenditures for Telephone Service by All Households |  |  |  |  |  |  |  |
| $1980{ }^{13}$ | \$325 | \$325 |  | \$335 | \$303 | \$339 | \$320 |
| $1981{ }^{15}$ | \$360 | \$360 |  | \$358 | \$353 | \$365 | \$366 |
| $1982{ }^{15}$ | \$375 | \$375 |  | \$351 | \$364 | \$372 | \$426 |
| $1983{ }^{15}$ | \$415 | \$415 |  | \$410 | \$393 | \$435 | \$419 |
| 1984 | \$435 | \$450 | \$359 | \$433 | \$407 | \$445 | \$458 |
| 1985 | \$455 | \$466 | \$402 | \$459 | \$419 | \$457 | \$500 |
| 1986 | \$471 | \$478 | \$425 | \$470 | \$444 | \$477 | \$494 |
| 1987 | \$499 | \$503 | \$475 | \$501 | \$464 | \$505 | \$532 |
| 1988 | \$537 | \$544 | \$493 | \$524 | \$498 | \$545 | \$585 |
| 1989 | \$567 | \$577 | \$505 | \$570 | \$532 | \$572 | \$601 |
| 1990 | \$592 | \$599 | \$549 | \$589 | \$547 | \$616 | \$611 |
| 1991 | \$618 | \$621 | \$601 | \$621 | \$595 | \$616 | \$647 |
| 1992 | \$623 | \$629 | \$580 | \$636 | \$589 | \$624 | \$646 |
| 1993 | \$658 | \$666 | \$606 | \$677 | \$616 | \$673 | \$664 |
| 1994 | \$690 | \$698 | \$642 | \$700 | \$663 | \$690 | \$713 |
| Telephone Expenditures as a Percentage of Total Household Expenditures |  |  |  |  |  |  |  |
| $1980{ }^{15}$ | 1.9\% | 1.9\% |  | 1.9\% | 1.9\% | 2.1\% | 1.8\% |
| $1981{ }^{15}$ | 2.1\% | 2.1\% |  | 2.1\% | 2.0\% | 2.1\% | 1.9\% |
| $1982{ }^{15}$ | 2.1\% | 2.1\% |  | 2.1\% | 2.0\% | 2.1\% | 2.2\% |
| $1983{ }^{15}$ | 2.1\% | 2.1\% |  | 2.1\% | 2.0\% | 2.3\% | 1.9\% |
| 1984 | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 1.9\% | 2.1\% | 1.9\% |
| 1985 | 1.9\% | 1.9\% | 2.0\% | 2.0\% | 1.8\% | 2.0\% | 1.9\% |
| 1986 | 2.0\% | 1.9\% | 2.2\% | 1.9\% | 2.0\% | 2.1\% | 1.9\% |
| 1987 | 2.0\% | 2.0\% | 2.3\% | 2.0\% | 2.0\% | 2.2\% | 1.9\% |
| 1988 | 2.1\% | 2.0\% | 2.3\% | 2.0\% | 2.0\% | 2.2\% | 2.0\% |
| 1989 | 2.0\% | 2.0\% | 2.2\% | 2.0\% | 2.0\% | 2.2\% | 1.9\% |
| 1990 | 2.1\% | 2.1\% | 2.2\% | 2.1\% | 2.1\% | 2.3\% | 1.9\% |
| 1991 | 2.1\% | 2.0\% | 2.4\% | 2.0\% | 2.2\% | 2.2\% | 2.0\% |
| 1992 | 2.1\% | 2.1\% | 2.3\% | 2.0\% | 2.1\% | 2.2\% | 1.9\% |
| 1993 | 2.1\% | 2.1\% | 2.3\% | 2.1\% | 2.1\% | 2.3\% | 1.9\% |
| 1994 | 2.2\% | 2.2\% | 2.2\% | 2.1\% | 2.2\% | 2.3\% | 2.0\% |

${ }^{12}$ The data in tables $8 \mathrm{~A}, 8 \mathrm{~B}$, and 8 C reflect the total household expenditures for all telephone services by all households, including those that do not have telephone service. Thus, the data likely understate expenditures for those households with service and overstate expenditures for those households without service. The household telephone expenditure data are recast in Tables 9A through 9C to show average bills for households with service.
${ }^{13}$ The nationwide estimates for 1980 through 1983 were based on samples that did not include rural areas. In addition, the BLS did not begin integrating the diary and interview surveys until 1984. Accordingly, some caution should be used in comparing estimates for before and after 1984.

| Table 8B <br> Annual Expenditures for Telephone Service by Race and Income |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | By Race |  | Households grouped by total income from lowest to highest quintile |  |  |  |  |
|  | White \& Other | Black | 1 | 2 | 3 | 4 | 5 |
| Average Expenditures for Telephone Service by All Households |  |  |  |  |  |  |  |
| $1980{ }^{14}$ | \$321 | \$356 | \$202 | \$266 | \$335 | \$365 | \$450 |
| $1981{ }^{16}$ | \$359 | \$370 | \$235 | \$294 | \$361 | \$415 | \$487 |
| $1982{ }^{16}$ | \$368 | \$432 | \$257 | \$314 | \$354 | \$423 | \$506 |
| $1983{ }^{16}$ | \$411 | \$448 | \$268 | \$353 | \$386 | \$472 | \$571 |
| 1984 | \$432 | \$462 | \$295 | \$350 | \$430 | \$476 | \$630 |
| 1985 | \$454 | \$463 | \$311 | \$363 | \$449 | \$503 | \$628 |
| 1986 | \$470 | \$478 | \$337 | \$383 | \$453 | \$526 | \$662 |
| 1987 | \$498 | \$506 | \$335 | \$403 | \$501 | \$547 | \$670 |
| 1988 | \$537 | \$536 | \$352 | \$441 | \$538 | \$585 | \$727 |
| 1989 | \$563 | \$603 | \$370 | \$459 | \$564 | \$644 | \$757 |
| 1990 | \$588 | \$624 | \$402 | \$496 | \$585 | \$647 | \$818 |
| 1991 | \$613 | \$657 | \$415 | \$532 | \$596 | \$665 | \$834 |
| 1992 | \$619 | \$647 | \$424 | \$533 | \$621 | \$677 | \$844 |
| 1993 | \$650 | \$719 | \$457 | \$532 | \$652 | \$731 | \$911 |
| 1994 | \$681 | \$756 | \$450 | \$587 | \$674 | \$763 | \$967 |
| Telephone Expenditures as a Percentage of Total Household Expenditures |  |  |  |  |  |  |  |
| $1980{ }^{16}$ | 1.9\% | 3.0\% | 2.6\% | 2.3\% | 2.2\% | 1.8\% | 1.5\% |
| $1981{ }^{16}$ | 2.0\% | 2.9\% | 3.0\% | 2.5\% | 2.2\% | 2.0\% | 1.6\% |
| $1982{ }^{16}$ | 2.0\% | 3.3\% | 3.2\% | 2.7\% | 2.2\% | 2.0\% | 1.5\% |
| $1983{ }^{16}$ | 2.0\% | 3.5\% | 3.1\% | 2.8\% | 2.2\% | 2.0\% | 1.5\% |
| 1984 | 1.9\% | 3.2\% | 2.7\% | 2.4\% | 2.2\% | 1.8\% | 1.5\% |
| 1985 | 1.9\% | 2.9\% | 2.7\% | 2.4\% | 2.2\% | 1.8\% | 1.4\% |
| 1986 | 1.9\% | 3.0\% | 2.9\% | 2.6\% | 2.1\% | 1.8\% | 1.4\% |
| 1987 | 2.0\% | 3.1\% | 3.2\% | 2.6\% | 2.3\% | 1.8\% | 1.4\% |
| 1988 | 2.0\% | 3.2\% | 3.2\% | 2.6\% | 2.3\% | 1.8\% | 1.5\% |
| 1989 | 1.9\% | 3.3\% | 3.1\% | 2.6\% | 2.3\% | 1.9\% | 1.4\% |
| 1990 | 2.0\% | 3.3\% | 3.1\% | 2.8\% | 2.4\% | 1.9\% | 1.5\% |
| 1991 | 2.0\% | 3.3\% | 3.1\% | 2.8\% | 2.3\% | 1.8\% | 1.4\% |
| 1992 | 2.0\% | 3.3\% | 3.4\% | 2.8\% | 2.3\% | 1.9\% | 1.5\% |
| 1993 | 2.0\% | 3.5\% | 3.3\% | 2.7\% | 2.5\% | 2.0\% | 1.5\% |
| 1994 | 2.1\% | 3.4\% | 3.2\% | 2.8\% | 2.3\% | 2.0\% | 1.6\% |

14 The nationwide estimates for 1980 through 1983 were based on samples that did not include rural areas. In addition, the BLS did not begin integrating the diary and interview surveys until 1984. Accordingly, some caution should be used in comparing estimates for before and after 1984.

| Table 8C <br> Annual Expenditures for Telephone Service by Age |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Age of Head of Household |  |  |  |  |  |  |
|  | Under 25 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | over 74 |
| Average Expenditure for Telephone Service by All Households |  |  |  |  |  |  |  |
| $1980^{15}$ | \$248 | \$343 | \$401 | \$415 | \$319 |  |  |
| $1981{ }^{17}$ | \$275 | \$377 | \$433 | \$458 | \$364 |  |  |
| $1982{ }^{17}$ | \$266 | \$389 | \$436 | \$484 | \$391 |  |  |
| $1983{ }^{17}$ | \$275 | \$439 | \$472 | \$535 | \$421 |  |  |
| 1984 | \$292 | \$450 | \$541 | \$558 | \$451 | \$341 | \$266 |
| 1985 | \$323 | \$449 | \$535 | \$576 | \$473 | \$377 | \$298 |
| 1986 | \$342 | \$485 | \$546 | \$580 | \$483 | \$399 | \$316 |
| 1987 | \$381 | \$504 | \$586 | \$607 | \$521 | \$401 | \$328 |
| 1988 | \$417 | \$534 | \$617 | \$669 | \$543 | \$458 | \$338 |
| 1989 | \$396 | \$583 | \$640 | \$719 | \$567 | \$486 | \$360 |
| 1990 | \$430 | \$604 | \$682 | \$750 | \$590 | \$476 | \$376 |
| 1991 | \$471 | \$629 | \$684 | \$803 | \$641 | \$487 | \$376 |
| 1992 | \$469 | \$648 | \$698 | \$753 | \$652 | \$502 | \$421 |
| 1993 | \$512 | \$687 | \$734 | \$782 | \$707 | \$520 | \$441 |
| 1994 | \$570 | \$726 | \$766 | \$819 | \$697 | \$551 | \$445 |
| Telephone Expenditures as a Percentage of Total Household Expenditures |  |  |  |  |  |  |  |
| $1980{ }^{17}$ | 2.3\% | 2.0\% | 1.9\% | 1.8\% | 1.8\% |  |  |
| $1981{ }^{17}$ | 2.4\% | 2.0\% | 1.9\% | 2.0\% | 2.1\% |  |  |
| $1982{ }^{17}$ | 2.3\% | 2.1\% | 1.9\% | 2.1\% | 2.1\% |  |  |
| $1983{ }^{17}$ | 2.3\% | 2.2\% | 1.9\% | 2.1\% | 2.0\% |  |  |
| 1984 | 2.2\% | 2.0\% | 1.9\% | 1.9\% | 1.9\% | 2.2\% | 2.4\% |
| 1985 | 2.3\% | 1.9\% | 1.8\% | 1.9\% | 1.9\% | 2.1\% | 2.3\% |
| 1986 | 2.4\% | 2.0\% | 1.7\% | 1.8\% | 1.9\% | 2.3\% | 2.6\% |
| 1987 | 2.7\% | 2.1\% | 1.9\% | 1.9\% | 2.0\% | 2.1\% | 2.7\% |
| 1988 | 2.5\% | 2.1\% | 1.9\% | 2.0\% | 2.1\% | 2.3\% | 2.5\% |
| 1989 | 2.4\% | 2.2\% | 1.8\% | 2.0\% | 2.0\% | 2.3\% | 2.3\% |
| 1990 | 2.6\% | 2.1\% | 1.9\% | 2.0\% | 2.0\% | 2.3\% | 2.4\% |
| 1991 | 2.8\% | 2.1\% | 1.9\% | 2.1\% | 2.0\% | 2.2\% | 2.4\% |
| 1992 | 2.7\% | 2.2\% | 1.9\% | 2.0\% | 2.1\% | 2.2\% | 2.4\% |
| 1993 | 2.9\% | 2.4\% | 2.0\% | 1.9\% | 2.1\% | 2.2\% | 2.4\% |
| 1994 | 3.1\% | 2.4\% | 2.0\% | 2.0\% | 2.1\% | 2.2\% | 2.3\% |

${ }^{15}$ The nationwide estimates for 1980 through 1983 were based on samples that did not include rural areas. In addition, the BLS did not begin integrating the diary and interview surveys until 1984. Accordingly, some caution should be used in comparing estimates for before and after 1984.

Table 9A
Monthly Expenditures for Telephone Service by Households with Telephone Service ${ }^{16}$


[^7] Census data. Data in the table are rounded to the nearest \$0.10.
${ }^{17}$ These figures represent expenditures for toll service, connection charges, additional access lines, additional local service features such as touch-tone calling or call waiting, " 900 service" calls, directory listing charges, information calls, inside wiring maintenance plans, etc. The values in the tables are monthly bills, less the average cost for private line rotary service with unlimited local calling, based on the Urban Rates Survey. Access charges are significantly lower in rural areas because exchanges are significantly smaller. Rural rates were estimated as the Urban Rates Survey averages, less $\$ 3.00$ per month. Similar adjustments might be warranted for low income and elderly households, reflecting lifeline rates.

Table 9B
Monthly Expenditures for Telephone Service by Households with Telephone Service by Race and Income ${ }^{18}$

|  | By Race |  | Households grouped by total income from lowest to highest quintile |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | White \& Other | Black | 1 | 2 | 3 | 4 | 5 |
| Average Total Monthly Bill |  |  |  |  |  |  |  |
| 1984 | \$39.10 | \$48.20 | \$31.10 | \$32.70 | \$37.90 | \$40.60 | \$53.10 |
| 1985 | \$41.00 | \$47.60 | \$33.70 | \$34.10 | \$39.50 | \$42.90 | \$52.90 |
| 1986 | \$42.30 | \$48.80 | \$35.20 | \$35.40 | \$40.00 | \$44.80 | \$55.80 |
| 1987 | \$44.70 | \$51.50 | \$35.00 | \$37.30 | \$43.80 | \$46.60 | \$56.30 |
| 1988 | \$48.10 | \$53.80 | \$36.30 | \$40.50 | \$46.70 | \$49.90 | \$61.00 |
| 1989 | \$50.20 | \$60.40 | \$37.90 | \$42.00 | \$48.90 | \$54.90 | \$63.60 |
| 1990 | \$52.40 | \$62.30 | \$41.10 | \$45.30 | \$50.60 | \$55.00 | \$68.50 |
| 1991 | \$54.40 | \$65.60 | \$42.60 | \$48.60 | \$51.40 | \$56.10 | \$69.80 |
| 1992 | \$54.50 | \$64.00 | \$43.70 | \$48.40 | \$53.40 | \$57.10 | \$70.70 |
| 1993 | \$57.20 | \$70.30 | \$46.80 | \$48.00 | \$55.80 | \$61.50 | \$76.30 |
| 1994 | \$60.20 | \$73.50 | \$45.70 | \$53.20 | \$58.20 | \$64.40 | \$81.10 |
| Monthly Expenditures for Toll and other Discretionary Services ${ }^{19}$ |  |  |  |  |  |  |  |
| 1984 | \$25.70 | \$34.80 | \$17.70 | \$19.30 | \$24.50 | \$27.20 | \$39.70 |
| 1985 | \$26.50 | \$33.10 | \$19.20 | \$19.60 | \$25.00 | \$28.40 | \$38.40 |
| 1986 | \$26.20 | \$32.70 | \$19.10 | \$19.30 | \$23.90 | \$28.70 | \$39.70 |
| 1987 | \$28.00 | \$34.80 | \$18.30 | \$20.60 | \$27.10 | \$29.90 | \$39.60 |
| 1988 | \$31.50 | \$37.20 | \$19.70 | \$23.90 | \$30.10 | \$33.30 | \$44.40 |
| 1989 | \$32.70 | \$42.90 | \$20.40 | \$24.50 | \$31.40 | \$37.40 | \$46.10 |
| 1990 | \$34.60 | \$44.50 | \$23.30 | \$27.50 | \$32.80 | \$37.20 | \$50.70 |
| 1991 | \$35.70 | \$46.90 | \$23.90 | \$29.90 | \$32.70 | \$37.40 | \$51.10 |
| 1992 | \$35.80 | \$45.30 | \$25.00 | \$29.70 | \$34.70 | \$38.40 | \$52.00 |
| 1993 | \$38.30 | \$51.40 | \$27.90 | \$29.10 | \$36.90 | \$42.60 | \$57.40 |
| 1994 | \$41.20 | \$54.50 | \$26.70 | \$34.20 | \$39.20 | \$45.40 | \$62.10 |

Tables 9A, 9B, and 9C show average monthly bills for households with service. Not all households have telephone service. Census data show that about $94 \%$ of households had telephone service at any given time in 1994. About $95 \%$ of the households in the expenditure survey reported telephone expenditures. The $94 \%$ figure represents households that had service at the time they were questioned by Census. The $95 \%$ figure represents households that paid for telephone service during the previous three months.

[^8]|  | Table 9C <br> Monthly Expenditures for Telephone Service by Households with Telephone Service by Age ${ }^{20}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Age of Head of Household |  |  |  |  |  |  |
|  | Under 25 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | over 74 |
| 1984 | \$31.60 | \$40.90 | \$49.20 | \$50.70 | \$39.60 | \$29.50 | \$23.30 |
| 1985 | \$34.60 | \$41.00 | \$48.80 | \$52.60 | \$41.50 | \$32.80 | \$26.00 |
| 1986 | \$36.10 | \$43.80 | \$49.30 | \$52.40 | \$42.20 | \$34.70 | \$27.40 |
| 1987 | \$40.20 | \$45.50 | \$52.90 | \$54.80 | \$45.50 | \$34.80 | \$28.50 |
| 1988 | \$43.30 | \$48.10 | \$55.50 | \$60.20 | \$47.50 | \$39.60 | \$29.30 |
| 1989 | \$41.00 | \$52.40 | \$57.50 | \$64.60 | \$49.40 | \$42.10 | \$31.10 |
| 1990 | \$44.10 | \$54.40 | \$61.40 | \$67.50 | \$51.30 | \$40.90 | \$32.20 |
| 1991 | \$48.50 | \$56.50 | \$61.50 | \$72.20 | \$55.50 | \$41.80 | \$32.20 |
| 1992 | \$47.70 | \$58.00 | \$62.50 | \$67.40 | \$56.50 | \$43.10 | \$36.00 |
| 1993 | \$51.20 | \$61.20 | \$65.40 | \$69.70 | \$60.80 | \$44.50 | \$37.70 |
| 1994 | \$56.30 | \$64.80 | \$66.60 | \$73.20 |  | \$47.50 | \$38.40 |
|  | Monthly Exp | penditur | for Toll | dother D | retion | Services |  |
| 1984 | \$18.20 | \$27.50 | \$35.80 | \$37.30 | \$26.20 | \$16.10 | \$9.90 |
| 1985 | \$20.10 | \$26.50 | \$34.30 | \$38.10 | \$27.00 | \$18.30 | \$11.50 |
| 1986 | \$20.00 | \$27.70 | \$33.20 | \$36.30 | \$26.10 | \$18.60 | \$11.30 |
| 1987 | \$23.50 | \$28.80 | \$36.20 | \$38.10 | \$28.80 | \$18.10 | \$11.80 |
| 1988 | \$26.70 | \$31.50 | \$38.90 | \$43.60 | \$30.90 | \$23.00 | \$12.70 |
| 1989 | \$23.50 | \$34.90 | \$40.00 | \$47.10 | \$31.90 | \$24.60 | \$13.60 |
| 1990 | \$26.30 | \$36.60 | \$43.60 | \$49.70 | \$33.50 | \$23.10 | \$14.40 |
| 1991 | \$29.80 | \$37.80 | \$42.80 | \$53.50 | \$36.80 | \$23.10 | \$13.50 |
| 1992 | \$29.00 | \$39.30 | \$43.80 | \$48.70 | \$37.80 | \$24.40 | \$17.30 |
| 1993 | \$32.30 | \$42.30 | \$46.50 | \$50.80 | \$41.90 | \$25.60 | \$18.80 |
| 1994 | \$37.30 | \$45.80 | \$47.60 | \$54.20 |  | \$28.50 | \$19.40 |

Some households without service may be reporting calls from pay telephones or may have had service for only one or two months. Dividing the average annual telephone expenditures for all households by 12 and by the percentage of households with telephone service gives a reasonable estimate of the average monthly bill for households with service. This average was just over \$61 per month in 1994.

[^9]Tables 9A, 9B, and 9C also show monthly expenditures for toll and other discretionary services. This is the total monthly bill less the cost of a primary access line. The cost of the primary access line was based on the Urban Rates Survey residential rate averages for private line unlimited calling, including subscriber line charges, taxes, and surcharges. The balance of the monthly bill, amounting to $\$ 42$ per month in 1994, was for other services, such as toll service, connection charges, additional access lines, cellular service, additional local service features such as touch-tone calling or call waiting, "900 service" calls, directory listing charges, information calls, inside wiring maintenance plans, etc.

Data presented in Appendix 5 suggest that the bulk of these other monthly expenditures were for toll service. The revenues for most additional local services are reported to Account \#5060 -- Other local exchange revenue. This account covers secondary features such as touch-tone service, call forwarding and call waiting; revenue from the provision of record message service and directory assistance; and non premises specific central office charges such as basic connection. Appendix 5 shows that the Local Exchange Carriers (LECs) report slightly over five dollars per month per access line for this account. Some miscellaneous local service revenue, such as charges for unpublished numbers and inside wiring maintenance, are recorded in other local service accounts. As of 1995 , approximately $15 \%$ of residential customers have additional local access lines. An increasing number of residential customers have cellular service as well.

Data from the 1994 Annual Survey of Communication Services, published by the Bureau of the Census, indicates that residential customers spent $\$ 23.7$ billion for local service, $\$ 36.9$ billion for long distance service, and $\$ 5.9$ billion for network access before taxes. Thus approximately $55 \%$ of residential expenditures for telephone service are devoted to toll service. Census data shows that about 93 million households had telephone service in 1994. Dividing $\$ 36.9$ billion of toll expenditures by 93 million households suggests that the average household spent $\$ 33.06$ per month for toll service in 1994. A second estimate can be derived by multiplying the $55 \%$ percent expenditures for toll times the $\$ 61.30$ per month average telephone expenditure estimated by the consumer expenditure survey. This suggests that the average household spent $\$ 33.72$ per month for toll service in 1994.

Carriers filing FCC Form 431 TRS Fund worksheets reported that in 1994, about 65.9\% of MTS revenues were interstate. See Telecommunications Industry Revenue: TRS Fund Worksheet Data, Industry Analysis Division, February 1996. Thus, it appears that the average household spent between $\$ 21$ and $\$ 22$ per month for interstate calls and about $\$ 11$ on intrastate toll calls.

The Annual Survey of Communication Services indicates that the carriers earned revenue of about $\$ 22.27$ a month from each residential access line in 1994. The Urban Rates Survey estimates that flat rate local phone service, before taxes, averaged \$16.83 and the low cost service with 50 local calls averaged $\$ 13.15$, before taxes in 1994. Taken as a whole, it appears that residential customers probably spend between $\$ 5$ and $\$ 8$
monthly per line for other local services such as connection charges and additional calling features in 1994.

Figure 14
Changes in Consumer Expenditures
since 1980


1994 data.

Figure 14 shows that telephone expenditures and overall household expenditures moved in concert between 1980 and 1994. The average household expenditures for telephone service rose by about $112 \%$ over this period, while telephone rates, as measured by the CPI, rose by $60 \%$ over the same period. This suggests that slightly under one-half of the increase in household telephone expenditures was due to increased use of telephone service. The growth in household usage of telephone service was probably greater than this because the 1980 telephone expenditure data include equipment costs that are excluded from the

The nationwide monthly cost of local residential service was about $\$ 19$ in 1994, approximately $\$ 9$ higher than it was in 1980 . The average household spent about $\$ 42$ each month for toll and other discretionary services in 1994, approximately $\$ 21$ more than in 1980. Some of the growth in other expenditures was due to the unbundling of inside wiring maintenance and to consumers adding features such as call waiting. Much of the increase, however, was for increased long distance calling. Toll rates rose between 1980 and 1983. Between the AT\&T divestiture in 1984 and 1990, the cost of directly dialed interstate calls fell about 40\%, and the overall cost of interstate service fell about 30\%. It appears that households increased their use of toll services by about 10\% a year during this period. Since 1990, it appears that residential toll usage has been increasing by 7\% to $8 \%$ a year.

The data in Tables 8A through 9C allow some comparisons of telephone expenditures by demographic groups. Rural consumers have lower income and expenditure levels than urban consumers, but devote an equal percentage of expenditures to telephone service. Since 1984, telephone expenditures by rural households increased faster than expenditures by urban households. In 1994, rural households spent about as much for toll and discretionary services as urban households.

On average, black households spent more for telephone service than white and other households. Census data show that a smaller percentage of black households have
telephone service than other households. In November 1994, about 85.5\% of black households subscribed to telephone service, compared with $95.2 \%$ for non-black households. Taken together, the telephone expenditure and penetration data suggest that black households with telephone service have significantly higher toll bills than white households. Table 9B shows that the average monthly bill for black households was $\$ 73.50$ in 1994, compared with $\$ 60.20$ for white and other households. It appears that, on average, black households with telephone service spend more on toll and other discretionary services.

Tables 8B and 9B show expenditure data for households grouped by reported income. Averages are shown for the lowest quintile or fifth of households to the highest. Table 9B shows that expenditures for telephone service are closely related to financial means. Lower income households are less likely to have telephone service, but as a group devote a higher percentage of total expenditures to telephone service than do higher income households. The percentage of expenditures devoted to telephone service have remained fairly constant for the two highest income quintiles. The percentage rose for the two lowest income quintiles in the early 1980s when telephone rates generally increased, and between 1985 and 1990, when the federal subscriber line charge was introduced and rose to $\$ 3.50$ per residential line. Nonetheless, the data suggest that nearly half of the telephone service expenditures made by low income households are for toll and other discretionary services.

The income averages estimated by the Consumer Expenditure Survey, and classifications of expenditures based on income, are not as reliable as other data provided by the Consumer Expenditure Survey. About 10\% of households do not provide complete income information. Many households reporting low income have high expenditures, reflecting temporary declines in income, business losses for tax purposes, or the expenditure of savings by retired persons. At one time, the BLS published breakdowns by expenditure quintile. Thus, averages were calculated for the fifth of consumers with the lowest total expenditures, the next higher fifth, etc. Expenditure quintiles probably represent a better measure of household affluence than do income quintiles. The expenditure quintiles were also a flawed measure of affluence, however, because new car expenditures were recorded at the time of purchase, and car payments were excluded from expenditures. Other major installment purchases (except for housing) were treated similarly. Thus, a household's total expenditures would appear to be high in some years and low in other years. The 1986 averages by expenditure quintile show a greater disparity in telephone expenditures between the least affluent and most affluent households as compared to the expenditure averages by income quintile shown in Tables 8 and 9 .

Tables 8C and 9C show telephone expenditure patterns for households grouped by age. Households headed by persons under 25, and by persons 65 and older devote a higher percentage of overall expenditures to telephone service than other households. Households headed by persons age 74 and older devote about half of the telephone expenditures to basic local exchange service.

Figure 15 shows

Figure 15

## Changes in Consumer Expenditures for


changes in expenditures for toll and other discretionary services for several demographic groupings. The graph illustrates the considerable variation in year-to-year changes. The figure suggests that virtually all groups have shown sustained increases in toll usage since 1987.

Consumer Expenditure Survey data can be used to estimate the total residential market for telephone service. Multiplying the average household expenditures for telephone service by the number of households gives the estimate that consumers spent $\$ 70.5$ billion for telephone service in 1994. This figure can be compared with statistics from two other sources.

The Census Bureau began conducting annual surveys of the communications service industry in 1990. The survey asks both local and toll communications carriers to provide Local Service, Toll Service, Access Service (including subscriber line services), Cellular Service, Directory Advertising, and Other Operating revenues. The final category includes miscellaneous and non-regulated services. Carriers are asked to divide local, toll, and access revenues between residential and business customers. Census estimated that in 1994, telephone companies received $\$ 66.5$ billion from residential customers for local, toll, and access services, representing about half of local service revenues, and about $40 \%$ of toll service revenues. The $\$ 66.5$ billion total is about $\$ 5$ billion less than the figure based on the Consumer Expenditure Survey estimate.

An estimate of residential expenditures is also available from the Bureau of Economic Analysis (BEA), which produces estimates of Personal Consumption Expenditures (PCE) as part of the national income and product accounts. The PCE measures the goods and services purchased by the private individuals and nonprofit institutions within the United States. The PCE for telephone service was $\$ 79.8$ billion for
1994. The substantial increase in the PCE for telephone service between 1993 and 1994 was for the most part due to the inclusion of expenditures on cellular service.

The three estimates of household expenditures for telephone service span a considerable range. Much of the differences can be attributed to differences in scope and methodology of the surveys. These differences are summarized in table 10.

| Table 10 <br> Methods for Estimating Household Expenditures on Telephone Service (1994) |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Consumer Expenditure Survey | Personal Consumption Expenditures | Survey of Communication Services |
| Expenditures | \$70.5 Billion | \$79.8 Billion | \$66.5 Billion |
| Cellular Service | Included | Included | Not separately identified for residential * |
| Inside Wiring Maintenance charges | Included | Included | Not separately identified for residential * |
| CPE leases | Included | Included | Not separately identified for residential * |
| Revenue basis** | Billed | Billed | Billed |
| Coin Telephone traffic and calls charged to hotel or motel rooms | Not included | Included | Probably included with business |
| 900 service charges | Included | Excluded | Excluded |
| Taxes | Included | Included | Excluded |

* The survey estimated total Cellular revenues of $\$ 15.9$ billion in 1994. Inside wiring maintenance, CPE lease and other deregulated revenues were included with the $\$ 11.7$ billion reported as Other operating revenue in 1994. The survey also reported a total of $\$ 9.5$ billion in directory advertising revenues.
** U.S. Carriers billed $\$ 12.9$ billion for international telephone service in 1994, of which they paid $\$ 7.2$ billion to foreign carriers for settlements. Foreign carriers paid $\$ 2.9$ billion to U.S. carriers for settlements. Residential customers are thought to make about $2 / 3$ of all international calls, though firms reporting in the Survey of Communication Services are likely to include settlements as revenue from business customers rather than residential customers.

The overall PCE is significantly higher than the total household expenditures estimated by the Bureau of Labor Statistics. The PCE includes expenditures on behalf of individuals made by charities and institutions. The PCE also includes some imputed interest on bank accounts, imputed rental amounts for housing, and medical payments of
behalf of individuals made by the government. In addition, households appear to under report many categories of expenditures in the BLS survey. Thus, while telephone expenditures represent $2.1 \%$ of expenditures reported by the Bureau of Labor Statistics, it represents only $1.7 \%$ of the PCE.

Figure 16

in telephone company total operating revenues from the Statistics of Communications Common Carriers. The revenue figures do not include data for interexchange carriers other than AT\&T and Alascom, and even these two IXCs are not included in data from 1995. The PCE includes expenditures for equipment and taxes, which are also excluded from the revenue figures. While revenues from business customers were increasing more rapidly than revenues from residential customers through 1980, revenue from residential customers has since been increasing more rapidly than that of business customers. This is consistent with findings of the Census Bureau. Residential customers continue to account for a large percentage of usage.

Tables 11A through 11D show household expenditure data for selected cities. Because the number of household interviews by city is small, the Bureau of Labor Statistics combines two years worth of data to calculate city averages. Even so, users are cautioned that the samples are small, and changes over time may be due to sample differences, rather than real changes in expenditure patterns. Because of this concern, the BLS stopped publishing telephone and other expenditure detail by city. Thus, 1991 remains the latest available year. As also noted above, 1984 was the first year when the published figures integrated data from the interview and the diary surveys. These factors may explain some of the large increases in expenditures in some cities for the 1984 to 1985 period.

| Table 11A <br> Consumer Expenditure Data by City |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Northeast Census Region |  |  |  |  |  |
|  | New York City | Philadelphia | Boston | Pittsburgh | Buffalo |
| Average Household Expenditures |  |  |  |  |  |
| 1980-1981 | \$18,187 | \$17,938 | \$17,517 | \$16,484 | \$14,426 |
| 1982-1983 | \$19,017 | \$20,585 | \$18,032 | \$15,937 | \$16,249 |
| 1984-1985 | \$24,907 | \$24,073 | \$24,004 | \$20,586 | \$19,120 |
| 1986-1987 | \$28,087 | \$25,308 | \$26,624 | \$22,255 | \$20,264 |
| 1988-1989 | \$31,412 | \$29,564 | \$30,361 | \$22,723 | \$22,283 |
| 1990-1991 | \$34,583 | \$31,795 | \$30,835 | \$28,626 | \$25,119 |
| Average Household Telephone Expenditures |  |  |  |  |  |
| 1980-1981 | \$412 | \$321 | \$351 | \$281 | \$319 |
| 1982-1983 | \$492 | \$354 | \$272 | \$312 | \$378 |
| 1984-1985 | \$549 | \$457 | \$362 | \$359 | \$400 |
| 1986-1987 | \$638 | \$426 | \$401 | \$447 | \$440 |
| 1988-1989 | \$718 | \$499 | \$548 | \$430 | \$486 |
| 1990-1991 | \$770 | \$622 | \$584 | \$500 | \$539 |
| Telephone Expenditures as a Percentage of Total Expenditures |  |  |  |  |  |
| 1980-1981 | 2.3\% | 1.8\% | 2.0\% | 1.7\% | 2.2\% |
| 1982-1983 | 2.6\% | 1.7\% | 1.5\% | 2.0\% | 2.3\% |
| 1984-1985 | 2.2\% | 1.9\% | 1.5\% | 1.7\% | 2.1\% |
| 1986-1987 | 2.3\% | 1.7\% | 1.5\% | 2.0\% | 2.2\% |
| 1988-1989 | 2.3\% | 1.7\% | 1.8\% | 1.9\% | 2.2\% |
| 1990-1991 | 2.2\% | 2.0\% | 1.9\% | 1.7\% | 2.1\% |


| Table 11B <br> Consumer Expenditure Data by City |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| South Census Region |  |  |  |  |  |  |
|  | Washington, DC | Baltimore | Atlanta | Miami | DallasFort Worth | Houston |
| Average Household Expenditures |  |  |  |  |  |  |
| 1980-1981 | \$20,094 | \$18,385 | \$15,909 | \$14,138 | \$21,943 | \$19,545 |
| 1982-1983 | \$22,249 | \$19,973 | \$21,121 | \$18,319 | \$28,289 | \$20,256 |
| 1984-1985 | \$33,499 | \$23,203 | \$25,528 | \$23,971 | \$32,838 | \$25,645 |
| 1986-1987 | \$34,418 | \$24,163 | \$28,715 | \$27,279 | \$28,561 | \$28,798 |
| 1988-1989 | \$37,254 | \$27,896 | \$30,376 | \$31,108 | \$33,736 | \$29,769 |
| 1990-1991 | \$38,560 | \$33,208 | \$34,163 | \$32,053 | \$33,500 | \$32,298 |
| Household Telephone Expenditures |  |  |  |  |  |  |
| 1980-1981 | \$370 | \$369 | \$353 | \$355 | \$407 | \$388 |
| 1982-1983 | \$420 | \$366 | \$419 | \$508 | \$427 | \$396 |
| 1984-1985 | \$622 | \$435 | \$538 | \$528 | \$527 | \$492 |
| 1986-1987 | \$658 | \$467 | \$531 | \$599 | \$553 | \$556 |
| 1988-1989 | \$666 | \$509 | \$566 | \$688 | \$698 | \$620 |
| 1990-1991 | \$699 | \$600 | \$705 | \$778 | \$669 | \$686 |
| Telephone Expenditures as a Percentage of Total Expenditures |  |  |  |  |  |  |
| 1980-1981 | 1.8\% | 2.0\% | 2.2\% | 2.5\% | 1.9\% | 2.0\% |
| 1982-1983 | 1.9\% | 1.8\% | 2.0\% | 2.8\% | 1.5\% | 2.0\% |
| 1984-1985 | 1.9\% | 1.9\% | 2.1\% | 2.2\% | 1.6\% | 1.9\% |
| 1986-1987 | 1.9\% | 1.9\% | 1.8\% | 2.2\% | 1.9\% | 1.9\% |
| 1988-1989 | 1.8\% | 1.8\% | 1.9\% | 2.2\% | 2.1\% | 2.1\% |
| 1990-1991 | 1.8\% | 1.8\% | 2.1\% | 2.4\% | 2.0\% | 2.1\% |

The Bureau of Labor Statistics changed the sample base in 1986, which could cause some differences between the 1984 to 1985 averages, and the 1986 to 1987 averages. Prior to 1986, the survey sample was selected based on 1970 census data. Starting with 1986, the survey sample has been selected based on the 1980 census. This affects the sample mix of center city verses suburban households. This may be responsible for some changes in expenditure averages for some cities.

Telephone expenditures are closely related to the overall level of household expenditures. During the 1990-1991 time period, average expenditures for telephone service ranged from $\$ 500$ in Pittsburgh to $\$ 778$ in Miami. Households in Pittsburgh, however, devoted $1.7 \%$ of total expenditures to telephone service compared with $2.4 \%$ for Miami, a smaller disparity.

| Table 11C <br> Consumer Expenditure Data by City |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Midwest Census Region |  |  |  |  |  |  |  |
|  | Chicago | Detroit | Milwaukee | Minneapolis | Cleveland | Cincinnati | St Louis |
| Average Household Expenditures |  |  |  |  |  |  |  |
| 1980-1981 | \$18,842 | \$17,614 | \$16,800 | \$15,481 | \$18,165 | \$14,527 | \$16,249 |
| 1982-1983 | \$20,420 | \$20,329 | \$18,329 | \$19,970 | \$18,713 | \$15,973 | \$16,973 |
| 1984-1985 | \$25,234 | \$24,964 | \$18,728 | \$24,271 | \$21,501 | \$20,750 | \$21,044 |
| 1986-1987 | \$28,217 | \$25,248 | \$22,717 | \$26,735 | \$26,331 | \$24,135 | \$24,950 |
| 1988-1989 | \$32,349 | \$28,100 | \$25,920 | \$31,140 | \$27,796 | \$27,601 | \$26,361 |
| 1990-1991 | \$32,568 | \$29,732 | \$27,843 | \$34,801 | \$26,960 | \$27,781 | \$27,743 |
| Average Household Telephone Expenditures |  |  |  |  |  |  |  |
| 1980-1981 | \$412 | \$345 | \$290 | \$267 | \$322 | \$297 | \$317 |
| 1982-1983 | \$428 | \$483 | \$276 | \$336 | \$363 | \$341 | \$349 |
| 1984-1985 | \$481 | \$495 | \$355 | \$365 | \$399 | \$361 | \$405 |
| 1986-1987 | \$569 | \$555 | \$434 | \$462 | \$452 | \$411 | \$463 |
| 1988-1989 | \$559 | \$664 | \$473 | \$492 | \$490 | \$497 | \$561 |
| 1990-1991 | \$660 | \$665 | \$538 | \$524 | \$525 | \$528 | \$592 |
| Telephone Expenditures as a Percentage of Total Expenditures |  |  |  |  |  |  |  |
| 1980-1981 | 2.2\% | 2.0\% | 1.7\% | 1.7\% | 1.8\% | 2.0\% | 2.0\% |
| 1982-1983 | 2.1\% | 2.4\% | 1.5\% | 1.7\% | 1.9\% | 2.1\% | 2.1\% |
| 1984-1985 | 1.9\% | 2.0\% | 1.9\% | 1.5\% | 1.9\% | 1.7\% | 1.9\% |
| 1986-1987 | 2.0\% | 2.2\% | 1.9\% | 1.7\% | 1.7\% | 1.7\% | 1.9\% |
| 1988-1989 | 1.7\% | 2.4\% | 1.8\% | 1.6\% | 1.8\% | 1.8\% | 2.1\% |
| 1990-1991 | 2.0\% | 2.2\% | 1.9\% | 1.5\% | 1.9\% | 1.9\% | 2.1\% |

A substantial body of research demonstrates that there is a strong relationship between income and telephone expenditures. Most researchers have also generally concluded that the price elasticity for local telephone service is relatively low. A pooled cross section and times series regression was used to check whether the expenditure data and rate level data are consistent with these previous findings. The simple analysis that follows is not intended to quantify relationships, but rather, is used to substantiate rate and expenditure data presented in this report.

| Table 11D <br> Consumer Expenditure Data by City |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| West Census Region |  |  |  |  |  |  |  |
|  | Los Angeles | San Francisco | San Diego | Portland | Seattle | Honolulu | Anchorage |
| Average Household Expenditures |  |  |  |  |  |  |  |
| 1980-1981 | \$19,561 | \$20,850 | \$18,665 | \$16,865 | \$18,195 | \$18,584 | \$22,664 |
| 1982-1983 | \$22,626 | \$24,039 | \$21,728 | \$17,204 | \$19,648 | \$22,247 | \$27,276 |
| 1984-1985 | \$28,157 | \$30,376 | \$25,053 | \$20,664 | \$23,879 | \$26,803 | \$30,472 |
| 1986-1987 | \$28,462 | \$31,044 | \$28,511 | \$24,452 | \$27,939 | \$28,239 | \$34,406 |
| 1988-1989 | \$33,482 | \$36,087 | \$33,351 | \$26,721 | \$30,915 | \$33,425 | \$39,923 |
| 1990-1991\| | \$35,673 | \$39,707 | \$32,983 | \$29,228 | \$35,086 | \$36,294 | \$43,991 |
| Average Household Telephone Expenditures |  |  |  |  |  |  |  |
| 1980-1981 | \$352 | \$385 | \$344 | \$332 | \$339 | \$291 | \$473 |
| 1982-1983 | \$447 | \$506 | \$437 | \$364 | \$387 | \$368 | \$561 |
| 1984-1985 | \$567 | \$535 | \$472 | \$445 | \$441 | \$381 | \$528 |
| 1986-1987 | \$558 | \$507 | \$510 | \$500 | \$486 | \$465 | \$576 |
| 1988-1989 | \$677 | \$666 | \$560 | \$521 | \$607 | \$550 | \$596 |
| 1990-1991 | \$748 | \$608 | \$608 | \$585 | \$607 | \$533 | \$683 |
| Telephone Expenditures as a Percentage of Total Expenditures |  |  |  |  |  |  |  |
| 1980-1981 | 1.8\% | 1.8\% | 1.8\% | 2.0\% | 1.9\% | 1.6\% | 2.1\% |
| 1982-1983 | 2.0\% | 2.1\% | 2.0\% | 2.1\% | 2.0\% | 1.7\% | 2.1\%\% |
| 1984-1985 | 2.0\% | 1.8\% | 1.9\% | 2.2\% | 1.8\% | 1.4\% | 1.7\% |
| 1986-1987 | 2.0\% | 1.6\% | 1.8\% | 2.0\% | 1.7\% | 1.6\% | 1.7\% |
| 1988-1989 | 2.0\% | 1.8\% | 1.7\% | 2.0\% | 2.0\% | 1.6\% | 1.5\% |
| 1990-1991 | 2.1\% | 1.5\% | 1.8\% | 2.0\% | 1.7\% | 1.5\% | 1.6\% |

The regression used data from the twenty six cities, and for the years 1984/85, 1986/87, 1988/89 and 1990/91. The following is the resulting regression equation:

Telephone expenditures $=.0431$ * $(\text { EXP })^{.8646 ~ * ~}($ RATE $) .0869 *(\text { CONNECTION })^{0881}$ where

EXP is the average household expenditures for all items, which has been used as a surrogate for income RATE is the average cost of basic local service including subscriber charges and taxes
CONNECTION is the average cost of connection including taxes.
The regression has an R square of .68. The t statistics of the coefficients are 14.3 for the EXP variable, 2.5 for the RATE variable, and 2.7 for the CONNECTION variable. Differences in overall expenditure levels explain more than half of the city-to-city variation in telephone expenditures. This figure is probably high, because some of the city-to-city differences in overall expenditures and telephone expenditures are due to sampling error. If the sample for one city over represented affluent households, for example, both total
expenditures and telephone expenditures would be biased high. In any case, differences in household income is the greatest factor explaining differences in telephone expenditures rather than differences in local rates.

Households tend to spend more on telephone service in cities that have higher local rates and higher connection charges. However, differences in basic service and connection charges explain less than ten percent of the city-to-city variation in telephone expenditures. The regression implies a local service rate elasticity of -.1. The regression significantly overstates the local rate elasticity because differences in local rates may reflect, as well as explain, differences in telephone expenditure levels. Toll service covers a greater share of overall costs in states where toll usage is relatively high. As a consequence, local rates may be lower in these states. On the other hand, exchanges with larger local calling areas may have higher local rates to compensate for lower amounts of toll traffic. Appendix 5 shows that carriers have a greater disparity in local service revenues per access line than they do for overall revenues per access line. This suggests that these effects are significant and account for part of the local rate elasticities.

## b. Business Expenditures for Telephone Service

The Bureau of Economic Analysis constructs Input-output accounts of the U.S. economy. These tables trace the dollar flows between sectors of the economy and are used to determine the impact of demand changes in one sector of the economy on other sectors of the economy. The Bureau of Economic Analysis bases the tables on data collected from the census of manufacturers, which is conducted every five years. The most recently published tables contain values for 1987, based on the 1987 benchmark. The 1987 benchmark tables were published in the July 1994 Survey of Current Business. The 1987 estimates were published in the April 1992 Survey of Current Business. These tables are published at the 2 and 3 digit Standard Industrial Classification (SIC) level. Data at the 6 digit level, representing 541 industries, is available in The 1987 Benchmark Input-Output Accounts of the United States, Government Printing Office, July 1994.

The Input-output tables provide data for the "communications except radio and television" industry. Appendix 8 contains 1987 values of the use of communications services by other sectors of the economy, and purchases from other sectors of the economy by communications businesses. Table A8-1 shows total output and the purchases of communications by each industry. For each dollar of final sales, U.S. industry spends about 1 cent for communications services. This varies widely by industry. The "food and kindred products industry", for example, spends less than 1 cent for each dollar of sales, and accounts for less than . $3 \%$ of nationwide expenditures on telephone service. The "finance and insurance" industry spends about 1.7 cents for each dollar of sales, and accounts for $4.7 \%$ percent of telephone expenditures. Changes in telephone service rates can have a significant impact on industries with low profit margins as a
percentage of sales, such as "wholesale and retail trade", which spends 1.2 cents for each dollar of sales.

At the time of the 1987 benchmark survey, the communications industry derived $51 \%$ of its revenues from businesses and $38 \%$ from individuals. The balance was from gross private fixed investment, government purchases and exports. The Bureau of Economic Analysis categorizes net settlement payments to foreign countries as exports. According to BEA figures, the "wholesale and retail trade" industry purchased \$10.1 billion of communications in 1987 -- representing $6.3 \%$ of communications industry sales. Three other industries spent more than $\$ 4$ billion for communications in 1987, excluding the communications industry itself. These were "finance and insurance"; "business and professional services except medical"; and "health, educational, and social services and nonprofit organizations". As noted above, consumers devoted about 2\% of expenditures for telephone services. Overall, "communications excluding radio and television" represented about $1.7 \%$ of the gross domestic product (GDP).

Table A8-2 details the use of products and services by the communications industry. Purchased products and services represented about $41 \%$ of communications sales in 1987. The remaining $59 \%$ represented value added by the industry, and includes the cost of labor and return on investment. For each dollar of revenue, communications firms spend 4.14 cents for repair and maintenance construction; 1.35 cents for radio, TV, and communications equipment; 2.85 cents for business and professional services except medicinal; and 1.74 cents for real estate and rental. These figures show that the communications industry is not especially sensitive to price changes in any one industry.

## 7. Long Term Trends in Local Rates

Table 12 presents average residential and single-line business rates for 1983 through 1995. The averages show that local rates rose sharply between October 1983 and October 1984. The averages continued to rise through October 1989 principally due to the introduction of federal subscriber line charges. Since that time some carriers have increased local rates and simultaneously dropped touch-tone charges. However, state utility commissions have generally ordered more rate reductions than increases. Overall, local rates have shown relatively little increase since 1989. This is illustrated in Figure 18, which shows the breakdown of a residential customer bill for a touch-tone private line with unlimited calling.

Figure 18


| Table 12 <br> National Averages for Local Telephone Rates |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rates as of October 15 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| Residential rates ${ }^{22}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Unlimited service | \$10.50 | \$12.10 | \$12.17 | \$12.58 | \$12.44 | \$12.32 | \$12.30 | \$12.39 | \$13.10 | \$13.12 | \$13.22 | \$13.28 | \$13.62 |
| SLC | \$0.00 | \$0.00 | \$1.01 | \$2.04 | \$2.66 | \$2.67 | \$3.53 | \$3.55 | \$3.56 | \$3.55 | \$3.55 | \$3.55 | \$3.54 |
| Taxes ${ }^{23}$ | \$1.08 | \$1.25 | \$1.36 | \$1.51 | \$1.56 | \$1.58 | \$1.70 | \$1.85 | \$2.00 | \$2.03 | \$2.17 | \$2.24 | \$2.34 |
| Total | \$11.58 | \$13.35 | \$14.54 | \$16.13 | \$16.66 | \$16.57 | \$17.53 | \$17.79 | \$18.66 | \$18.70 | \$18.94 | \$19.07 | \$19.49 |
| Lowest generally available rate | \$5.37 | \$5.62 | \$5.75 | \$5.96 | \$5.81 | \$5.67 | \$5.67 | \$5.68 | \$6.18 | \$6.22 | \$6.43 | \$6.47 | \$6.68 |
| SLC | \$0.00 | \$0.00 | \$1.01 | \$2.04 | \$2.66 | \$2.67 | \$3.53 | \$3.55 | \$3.56 | \$3.55 | \$3.55 | \$3.55 | \$3.54 |
| Taxes ${ }^{25}$ | \$0.56 | \$0.58 | \$0.70 | \$0.84 | \$0.94 | \$0.91 | \$1.03 | \$1.15 | \$1.28 | \$1.31 | \$1.45 | \$1.50 | \$1.56 |
| Total | \$5.93 | \$6.20 | \$7.46 | \$8.84 | \$9.41 | \$9.25 | \$10.23 | \$10.38 | \$11.02 | \$11.08 | \$11.43 | \$11.52 | \$11.79 |
| Connection ${ }^{24}$ | \$35.01 | \$43.71 | \$44.32 | \$45.63 | \$44.04 | \$42.94 | \$42.71 | \$43.06 | \$42.00 | \$41.52 | \$41.38 | \$41.26 | \$40.91 |
| Taxes ${ }^{25}$ | \$1.75 | \$2.19 | \$2.22 | \$2.28 | \$2.20 | \$2.11 | \$2.24 | \$2.32 | \$2.19 | \$2.18 | \$2.21 | \$2.27 | \$2.42 |
| Total | \$36.76 | \$45.90 | \$46.54 | \$47.91 | \$46.24 | \$45.05 | \$44.95 | \$45.38 | \$44.19 | \$43.70 | \$43.59 | \$43.53 | \$43.33 |
| Business Rates |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Representative rate ${ }^{25}$ | \$29.16 | \$32.74 | \$33.42 | \$34.26 | \$33.71 | \$31.03 | \$31.06 | \$30.97 | \$32.29 | \$32.45 | \$32.70 | \$32.25 | \$32.46 |
| Touch-tone | ** | ** | ** | ** | ** | \$2.45 | \$2.43 | \$2.35 | \$1.84 | \$1.71 | \$1.67 | \$1.21 | \$0.97 |
| SLC | \$0.00 | \$0.00 | \$1.01 | \$2.04 | \$2.68 | \$2.69 | \$3.55 | \$3.57 | \$3.57 | \$3.56 | \$3.57 | \$3.57 | \$3.57 |
| Taxes ${ }^{25}$ | \$3.35 | \$3.77 | \$3.96 | \$4.17 | \$4.18 | \$3.95 | \$4.21 | \$4.32 | \$4.42 | \$4.57 | \$4.63 | \$4.61 | \$4.77 |
| Total | \$32.51 | \$36.51 | \$38.39 | \$40.47 | \$40.57 | \$40.12 | \$41.25 | \$41.21 | \$42.12 | \$42.29 | \$42.57 | \$41.64 | \$41.77 |
| charge for fiveminute local call | \$0.08 | \$0.09 | \$0.09 | \$0.09 | \$0.09 | \$0.09 | \$0.09 | \$0.09 | \$0.09 | \$0.09 | \$0.09 | \$0.09 | \$0.09 |
| Connection ${ }^{26}$ | \$56.04 | \$68.84 | \$70.82 | \$72.94 | \$72.15 | \$70.48 | \$71.05 | \$71.36 | \$72.75 | \$72.55 | \$71.41 | \$69.88 | \$67.87 |
| Touch-tone | ** | ** | ** | ** | ** | \$2.03 | \$1.70 | \$1.89 | \$1.13 | \$1.19 | \$1.17 | \$0.92 | \$0.27 |
| Taxes ${ }^{25}$ | \$3.08 | \$3.79 | \$3.90 | \$4.01 | \$3.97 | \$3.92 | \$4.06 | \$4.15 | \$4.32 | \$4.33 | \$4.25 | \$4.13 | \$4.18 |
| Total | \$59.12 | \$72.63 | \$74.72 | \$76.95 | \$76.12 | \$76.43 | \$76.81 | \$77.40 | \$78.20 | \$78.07 | \$76.83 | \$74.93 | \$72.32 |
| five-minute payphone call | \$0.17 | \$0.21 | \$0.22 | \$0.22 | \$0.23 | \$0.23 | \$0.23 | \$0.23 | \$0.23 | \$0.23 | \$0.23 | \$0.24 | \$0.25 |

${ }^{22}$ The residential rates shown in this table do not include additional charges for touch-tone service.
${ }^{23}$ Taxes include 911 charges
${ }^{24}$ Connection charges do not include drop line and block charges. Residential connection charges do not include additional charges for touch-tone service. Business connection charges for 1983 through 1987 include the additional connection charge for installing touch-tone service. The charge is shown separately thereafter.
${ }^{25}$ The representative rate is the single line rate for unlimited service where that service is offered, and the measured service rate plus additional charges for the first 200 five minute messages in other cities. The representative business rate includes the additional monthly cost for touch-tone service for 1983 through 1987. The additional charge is shown separately thereafter.

Figure 19


Figure 20


Changes in the 95 city averages are reasonably consistent with changes in published index levels. This is illustrated by Figure 19 and Figure 20. Figure 19 shows October to October percentage changes in residential rate averages, and corresponding changes in the CPI and PPI residential local service indices. Figure 20 shows October to October percentage changes in the single line business averages, and corresponding changes in the PPI business local service index.

Table 12 also shows the nationwide average pay phone rates at company-owned pay phones. Charges ranged from 10 cents in 5 of the sample cities, to 50 cents in Pascagoula, Mississippi. Local exchange company pay phone rates may be different in different parts of the same city. The most common charge is 25 cents in 69 of the sample cities. The most unusual rate is in North Carolina, where the tariffed rate is $\$ .2427$. Southern Bell actually collects 25 cents per call in the state.

AT\&T produced estimates of the average rate for residential service for January 1 of each year, 1940 through 1983. For much of that period AT\&T compiled rates in the same cities covered by the Industry Analysis Division's Urban Rates Survey. The AT\&T rate was calculated as an unweighted average of rates for the sample cities. The AT\&T estimates include any separate charges for a primary instrument, but do not include taxes. In addition, local service prior to 1984 included costs associated with maintaining inside wiring. Appendix 6 shows the AT\&T estimates for 1940 to 1983. Appendix 6 also shows the October 15 Urban Rates Survey averages from 1983 to the present. The Urban Rates

Survey averages included in Appendix 6 do not include taxes, the cost of customer premises equipment, or the cost of an inside wiring maintenance plan.

Figure 21


Figure 22


Figure 21 shows three measures of the cost of residential local service. The first series is the AT\&T estimate of the charge for basic service. The series was extended to the present using the year-to-year percentage changes in the Urban Rates Survey estimates. The graph also shows the CPI and PPI local service indices, rebased to appear on the same scale. While all three measures show general agreement, the average charge for basic service and the CPI series show a particularly close correlation.

Figure 22 also shows the estimated charge for basic service. The graph shows what the basic service charge would have been if it had increased at the rate of overall inflation. In addition, the graph shows the basic service charge with the federal subscriber line charge removed. Once the effects of subscriber line charges are removed, it is apparent that basic local rates consistently rose by less than overall inflation.

## 8. Long Term Trends in Toll Rates

For many years, the Bell System provided most of the nation's long distance service on a monopoly basis. Although competitors began providing MTS in the 1970s, AT\&T retained $90 \%$ of the long distance market at the time of the AT\&T divestiture in 1984. Until relatively recently, most service was billed in accordance with a single rate schedule. Accordingly, this section primarily focuses on the AT\&T basic MTS schedule. Over the past few years, however, discount plans have become more prevalent, thus some of the current discount plans are discussed here.

Table 13 provides rate information for AT\&T station-to-station interstate calls for December 1927 to the present. The table shows the date each AT\&T tariff became effective, and the day and night rates for 10 minute calls for nine specific distances. These nine mileages represent the midpoints of the current rate bands under 3000 miles. Through 1969, the table shows rates for station-to-station calls regardless of whether the call was directly dialed by the customer or placed by an operator since the caller paid the same rate in either case. Thereafter, the table shows rates for customer dialed calls. AT\&T first offered discounts for directly dialing interstate calls in 1970. However, customers were already directly dialing a majority of toll calls then. Both business and residential customers paid these rates through June 1993. Thereafter, AT\&T tariffed business rates separately. The rates in Table 13 do not reflect any volume discount plans.

Figure 23 shows the day rate charges over time for three distances -- 5 miles, 200 miles, and 2455 miles. The 200 mile rate applied to calls between New York City and Washington, DC. The 2455 mile

Figure 23

for a 10-minute Daytime Call York City and Los Angeles. At one time telephone rates were extremely distance sensitive. In 1927, a coast to coast call cost 100 times more than the shortest distance interstate toll call. Today, the rates are not especially distance sensitive. A day rate coast to coast call costs 31 cents per minute while the shortest distance interstate day rate toll call costs 26 cents per minute. Customers using discount plans would pay significantly less than these amounts, and in some cases are charged a constant amount per minute regardless of distance.

Table 13
AT\&T Interstate Residential Tariff Rates for 10-minute Calls

| Effective Date | 5 Mile Call |  | 16 Mile Call |  | 39 Mile Call |  | 90 Mile Call |  | 200 Mile Call |  | 334 Mile Call |  | 678 Mile Call |  | 1418 Mile Call |  | 2455 Mile Call |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Day | Night | Day | Night | Day | Night | Day | Night | Day | Night | D | Nigh | Day | Night | Day | Night | Day | Night |
| December 1,1927 | \$0.20 | \$0.20 | \$0.30 | \$0.30 | \$1.05 | \$1.05 | \$2.05 | \$1.05 | \$4.00 | \$2.00 | \$5.60 | \$3.00 | \$10.00 | \$5.00 | \$17.50 | \$10.00 | \$27.75 | \$15.50 |
| February 1, 1929 | \$0.20 | . 20 | \$0.30 | \$0.30 | \$1.05 | \$1.05 | \$2.05 | \$1.05 | \$3.60 | \$2.00 | \$5.05 | \$3.00 | \$9.05 | \$5.00 | \$15.50 | \$10.00 | \$27.75 | \$15.50 |
| January 1, 1930 | \$0.20 | 20 | \$0.30 | 0.30 | \$1.05 | \$1.05 | \$2.00 | \$1.05 | \$3.50 | \$2.00 | \$5.05 | \$3.00 | \$9.05 | \$5.00 | \$15.50 | \$10.00 | \$27.75 | \$15.50 |
| June 1, 1935 | \$0.20 | \$0.20 | \$0.35 | \$0.35 | \$1.05 | \$1.05 | \$2.00 | \$1.05 | \$3.50 | \$2.00 | \$5.05 | \$3.00 | \$9.05 | \$5.00 | \$15.50 | \$10.00 | \$27.75 | \$15.50 |
| January 15, 1936 | \$0.20 | \$0.20 | \$0.35 | \$0.35 | \$1.05 | \$1.05 | \$2.00 | \$1.05 | \$3.50 | \$2.00 | \$5.0 | \$3.00 | \$9.05 | \$5.00 | \$15.50 | \$10.00 | 7.25 | \$15.50 |
| September 1, 1936 | \$0.20 | \$0.20 | \$0.35 | \$0.35 | \$1.05 | \$1.05 | \$1.55 | \$1.05 | \$3.50 | \$2.00 | \$4.55 | \$2.60 | \$8.00 | \$4.60 | \$15.00 | \$9.05 | \$23.00 | \$15.00 |
| January 15, 1937 | \$0. | \$0.20 | \$0.35 | \$0.35 | \$1.05 | \$1.05 | \$1.55 | \$1.05 | \$2.55 | \$1.55 | \$3.60 | \$2.10 | \$6.55 | \$4.00 | \$12.75 | \$8.10 | \$23.00 | \$14.95 |
| May 1, 1940 | \$0. | . 20 | 0.35 | \$0.35 | \$1.05 | \$1.05 | \$1.55 | \$1.05 | \$2.55 | \$1.55 | \$3.60 | \$2.10 | \$6.00 | \$4.00 | \$10.00 | \$6.55 | \$13.10 | \$10.00 |
| July 10, 1941 | \$0.20 | \$0.20 | \$0.3 | \$0.35 | \$1.05 | \$1.05 | \$1.55 | \$1.05 | \$2.55 | \$1.55 | \$3.50 | \$2.10 | \$5.50 | \$4.00 | \$9.55 | \$6.55 | \$13.10 | \$10.00 |
| February 15, 1943 | \$0.20 | \$0.20 | \$0.35 | \$0.35 | \$1.05 | \$1.05 | \$1.20 | \$1.05 | \$2.20 | \$1.20 | \$2.80 | \$1.75 | \$4.45 | \$3.30 | \$7.80 | \$5.50 | \$11.00 | \$8.25 |
| July 1, 1945 | \$0.20 | \$0.20 | \$0.35 | \$0.35 | \$1.05 | \$1.05 | \$1.20 | \$1.05 | \$2.20 | \$1.20 | \$2.80 | \$1.75 | \$4.45 | \$3.30 | \$6.15 | \$4.95 | \$6.70 | \$5.50 |
| February 1, 1946 | \$0. | \$0.20 | \$0.35 | \$0.35 | \$1.05 | \$1.05 | \$1.20 | \$1.05 | \$2.20 | \$1.20 | \$2.80 | \$1.75 | \$4.45 | \$3.30 | \$5.55 | \$4.45 | \$6.70 | \$5.50 |
| March 1, 1952 | \$0.25 | \$0.25 | \$0.50 | \$0.50 | \$1.05 | \$1.05 | \$1.25 | \$1.05 | \$2.20 | \$1.20 | \$2.80 | \$1.75 | \$3.95 | \$2.85 | \$5.55 | \$4.45 | \$6.70 | \$5.50 |
| October 1, 1953 | \$0.25 | \$0.25 | \$0.50 | \$0.50 | \$1.05 | \$1.05 | \$1.60 | \$1.10 | \$2.20 | \$1.65 | \$3.15 | \$2.20 | \$4.30 | \$3.30 | \$5.90 | \$4.80 | 7.0 | 5.85 |
| Sept 19, 1959 | \$0.25 | \$0.25 | \$0.50 | \$0.50 | \$1.05 | \$1.05 | \$1.60 | \$1.10 | \$2.20 | \$1.65 | \$3.15 | \$2.20 | \$4.25 | \$3.25 | \$4.95 | \$3.85 | \$6.4 | \$4.90 |
| April 4, 1963 | \$0.45 | \$0.45 | \$0.55 | \$0.55 | \$1.05 | \$1.05 | \$1.60 | \$1.10 | \$2.20 | \$1.65 | \$3.15 | \$1.65 | \$4.25 | \$2.10 | \$4.95 | \$2.65 | \$6.45 | \$2.75 |
| February 1, 1965 | \$0.45 | \$0.45 | \$0.55 | \$0.55 | \$1.05 | \$1.05 | \$1.60 | \$1.10 | \$2.20 | \$1.65 | \$3.15 | \$1.65 | \$4.25 | \$2.10 | \$4.95 | \$2.55 | \$6.4 | \$2.75 |
| April 1, 1965 | \$0.45 | 45 | \$0.55 | . 55 | \$1.05 | \$1.05 | \$1.60 | 1.10 | \$2.20 | \$1.65 | .15 | \$1.65 | \$3.85 | \$2.10 | 4.85 | \$2.65 | \$5.50 | \$2.75 |
| November 1, 1967 | \$0.50 | \$0.50 | \$0.55 | \$0.55 | \$1.05 | \$1.05 | \$1.60 | \$1.10 | \$2.20 | \$1.65 | \$3.15 | \$1.65 | \$3.85 | \$2.10 | \$4.40 | \$2.60 | \$4.90 | \$2.75 |
| August 1, 1968 | \$0.5 | \$0.50 | \$0.55 | \$0.55 | \$1.05 | \$1.05 | \$1.60 | \$1.10 | \$2.20 | \$1.65 | \$3.15 | \$1.65 | \$3.75 | \$2.10 | \$4.35 | \$2.60 | \$4.85 | \$2.75 |
| January 1, 1970 | \$0.50 | \$0.45 | \$0.55 | \$0.45 | \$1.05 | \$1.05 | \$1.60 | \$1.05 | \$2.15 | \$1.55 | \$2.60 | \$1.55 | \$3.55 | \$1.55 | \$4.10 | \$2.05 | \$4.55 | \$2.15 |
| February 1, 1970 | \$0.50 | \$0.45 | \$0.55 | \$0.45 | \$1.05 | \$1.05 | \$1.60 | \$1.05 | \$2.10 | \$1.55 | \$2.55 | \$1.55 | \$3.15 | \$1.55 | \$4.05 | \$2.05 | \$4.5 | \$2.15 |
| January 26, 1971 | \$0.52 | \$0.31 | \$0.72 | \$0.38 | \$1.24 | \$0.75 | \$1.79 | \$1.05 | \$2.34 | \$1.46 | \$2.65 | \$1.55 | \$3.50 | \$1.55 | \$3.70 | \$2.05 | \$4.50 | \$2.15 |
| January 22, 1973 | \$0.5 | \$0.31 | \$0.72 | \$0.38 | \$1.24 | \$0.75 | \$1.98 | \$1.05 | \$2.48 | \$1.46 | \$2.79 | \$1.55 | \$3.60 | \$1.55 | \$4.29 | \$2.05 | \$4.67 | \$2.15 |
| March 9, 1975 | \$0.70 | \$0.27 | \$1.02 | \$0.40 | \$1.95 | \$0.78 | \$2.75 | \$1.10 | \$3.15 | \$1.26 | \$3.35 | \$1.34 | \$3.65 | \$1.45 | \$3.96 | \$1.58 | \$4.16 | \$1.66 |
| February 29, 1976 | \$0. | \$0.36 | \$1.40 | \$0.56 | \$2.15 | \$0.86 | \$2.95 | \$1.18 | \$3.25 | \$1.30 | \$3.45 | \$1.38 | \$3.56 | \$1.42 | \$3.76 | \$1.50 | \$3.96 | \$1.58 |
| September 13, 1977 | \$1.00 | \$0.40 | \$1.31 | \$0.52 | \$2.24 | \$0.89 | \$3.04 | \$1.21 | \$3.34 | \$1.33 | \$3.54 | \$1.41 | \$3.56 | \$1.42 | \$3.76 | \$1.50 | \$3.9 | \$1.58 |
| June 6, 1980 | \$1.01 | \$0.40 | \$1.41 | \$0.56 | \$2.35 | \$0.94 | \$3.15 | \$1.26 | \$3.54 | \$1.41 | \$3.74 | \$1.49 | \$3.77 | \$1.50 | \$3.97 | \$1.58 | \$4.17 | \$1.66 |
| June 28, 1981 | \$1.13 | \$0.45 | \$1.63 | \$0.65 | \$2.77 | \$1.10 | \$3.67 | \$1.46 | \$4.07 | \$1.62 | \$4.36 | \$1.74 | \$4.39 | \$1.75 | \$4.60 | \$1.84 | 4.8 | \$1.92 |
| April 2, 1982 | \$1.7 | \$0.70 | \$2.38 | \$0.95 | \$3.00 | \$1.20 | \$3.90 | \$1.56 | \$4.09 | \$1.63 | \$4.37 | \$1.74 | \$4.49 | \$1.79 | \$4.60 | \$1.84 | \$5.15 | \$2.06 |
| May 25, 1984 | \$1.6 | \$0.66 | \$2.27 | \$0.90 | \$2.79 | \$1.11 | \$3.69 | \$1.47 | \$3.87 | \$1.54 | \$4.06 | \$1.62 | \$4.18 | \$1.67 | \$4.2 | \$1.71 | \$4.83 | 1.93 |
| April 26, 1985 | \$2 | 0.83 | \$2.71 | \$1.08 | \$3.21 | \$1.28 | \$3.69 | \$1.47 | \$3.87 | \$1.54 | \$4.06 | \$1.62 | \$4.18 | \$1.67 | \$4.29 | \$1.71 | \$4.83 | \$1.93 |
| June 1, 1985 | \$1.9 | \$0.79 | \$2.59 | \$1.03 | \$3.00 | \$1.20 | \$3.48 | \$1.39 | \$3.66 | \$1.46 | \$3.85 | \$1.54 | \$3.97 | \$1.58 | \$4.07 | \$1.62 | \$4.4 | \$1.77 |
| June 11986 | \$1.75 | \$0.77 | \$2.26 | \$0.99 | \$2.57 | \$1.13 | \$2.96 | \$1.30 | \$3.14 | \$1.38 | \$3.33 | \$1.46 | \$3.44 | \$1.51 | \$3.54 | \$1.55 | \$3.80 | \$1.67 |
| July 11, 1986 | \$1.7 | \$0.77 | \$2.26 | \$0.99 | \$2.57 | \$1.13 | \$2.95 | \$1.29 | \$3.14 | \$1.38 | \$3.33 | \$1.46 | \$3.44 | \$1.51 | \$3.54 | \$1.55 | \$3.7 | \$1.66 |
| January 1, 1987 | \$1. | \$0.74 | \$1.99 | \$0.93 | \$2.20 | \$1.03 | \$2.49 | \$1.17 | \$2.67 | \$1.25 | \$2.86 | \$1.34 | \$3.06 | \$1.43 | \$3.16 | \$1.48 | \$3.28 | \$1.54 |
| July 1, 1987 | \$1. | \$0.69 | \$1.89 | \$0.88 | \$2.09 | \$0.98 | \$2.38 | \$1.11 | \$2.56 | \$1.20 | \$2.75 | \$1.29 | \$2.95 | \$1.38 | \$2.96 | \$1.39 | \$3.08 | \$1.44 |
| January 1, 1988 | \$1. | \$0.73 | \$1.79 | \$0.89 | \$1.99 | \$0.99 | \$2.18 | \$1.09 | \$2.45 | \$1.22 | \$2.55 | \$1.27 | \$2.74 | \$1.37 | \$2.76 | \$1.38 | \$2.8 | \$1.44 |
| December 1, 1988 | \$1. | \$0.70 | \$1.78 | \$0.85 | \$1.98 | \$0.95 | \$2.16 | \$1.03 | \$2.34 | \$1.12 | \$2.43 | \$1.16 | \$2.64 | \$1.26 | \$2.64 | \$1.26 | \$2.7 | \$1.32 |
| April 1, 1989 | \$1.7 | \$0.88 | \$2.01 | \$1.04 | \$2.21 | \$1.14 | \$2.30 | \$1.19 | \$2.31 | \$1.20 | \$2.31 | \$1.20 | \$2.41 | \$1.25 | \$2.51 | \$1.30 | \$2.51 | \$1.30 |
| July 1, 1989 | \$1.71 | \$0.88 | \$2.01 | \$1.04 | \$2.21 | \$1.14 | \$2.21 | \$1.14 | \$2.30 | \$1.19 | \$2.31 | \$1.20 | \$2.40 | \$1.24 | \$2.50 | \$1.30 | \$2.50 | \$1.30 |
| November 29, 1989 | \$1.71 | \$0.97 | \$2.01 | \$1.10 | \$2.21 | \$1.20 | \$2.21 | \$1.20 | \$2.30 | \$1.21 | \$2.31 | \$1.22 | \$2.40 | \$1.26 | \$2.50 | \$1.30 | \$2.50 | \$1.32 |
| January 1, 1990 | \$1.71 | \$0.97 | \$2.00 | \$1.10 | \$2.01 | \$1.20 | \$2.15 | \$1.20 | \$2.15 | \$1.21 | \$2.30 | \$1.22 | \$2.39 | \$1.26 | \$2.50 | \$1.30 | \$2.5 | \$1.32 |
| July 1, 1990 | \$1.71 | \$0.97 | \$1.97 | \$1.10 | \$1.97 | \$1.20 | \$2.15 | \$1.20 | \$2.15 | \$1.21 | \$2.30 | \$1.22 | \$2.39 | \$1.26 | \$2.49 | \$1.30 | \$2.4 | \$1.32 |
| January 1, 1991 | \$1.7 | \$0.97 | \$1.80 | \$1.10 | \$1.95 | \$1.20 | \$2.10 | \$1.20 | \$2.10 | \$1.21 | \$2.30 | \$1.22 | \$2.30 | \$1.26 | \$2.48 | \$1.30 | \$2.49 | \$1.32 |
| February 16, 1991 | \$1.7 | \$1.05 | \$1.80 | \$1.13 | \$1.90 | \$1.20 | \$2.10 | \$1.20 | \$2.10 | \$1.22 | \$2.30 | \$1.25 | \$2.30 | \$1.30 | \$2.48 | \$1.33 | \$2.4 | \$1.35 |
| July 1, 1991 | \$1 | . 05 | \$1.80 | \$1.13 | \$1.90 | \$1.20 | \$2.10 | \$1.20 | \$2.10 | \$1.22 | \$2.30 | \$1.25 | \$2.30 | \$1.30 | \$2.44 | \$1.33 | \$2. | \$1.35 |
| January 2, 1992 | \$1.80 | \$1.05 | \$1.90 | \$1.13 | \$2.00 | \$1.20 | \$2.10 | \$1.20 | \$2.10 | \$1.22 | \$2.30 | \$1.25 | \$2.30 | \$1.30 | \$2.46 | \$1.33 | \$2.50 | 1.35 |
| June 1, 1992 | \$2.00 | \$1.10 | \$2.20 | \$1.20 | \$2.20 | \$1.20 | \$2.20 | \$1.20 | \$2.20 | \$1.30 | \$2.30 | \$1.30 | \$2.30 | \$1.30 | \$2.40 | \$1.30 | \$2.50 | \$1.30 |
| August 19, 1992 | \$2.00 | \$1.10 | \$2.20 | \$1.20 | \$2.20 | \$1.20 | \$2.20 | \$1.20 | \$2.20 | \$1.30 | \$2.30 | \$1.30 | \$2.30 | \$1.30 | \$2.40 | \$1.30 | \$2.5 | \$1.30 |
| February 19, 1993 | \$2.10 | \$1.10 | \$2.20 | \$1.20 | \$2.20 | \$1.20 | \$2.30 | \$1.20 | \$2.30 | \$1.30 | \$2.30 | \$1.30 | \$2.30 | \$1.30 | \$2.40 | \$1.30 | \$2.5 | \$1.30 |
| July 19, 1993 | \$2.10 | \$1.10 | \$2.20 | \$1.20 | \$2.20 | \$1.20 | \$2.30 | \$1.20 | \$2.30 | \$1.30 | \$2.30 | \$1.30 | \$2.30 | \$1.30 | \$2.40 | \$1.30 | \$2.50 | \$1.30 |
| August 16, 1993 | \$2. | . 10 | 2.30 | \$1.20 | \$2.30 | \$1.20 | \$2.30 | \$1.20 | \$2.30 | \$1.30 | \$2.30 | \$1.30 | \$2.30 | \$1.30 | \$2.40 | \$1.30 | \$2. | \$1.30 |
| September 29, 1993 | \$2.20 | \$1.10 | \$2.30 | \$1.20 | \$2.30 | \$1.20 | \$2.30 | \$1.20 | \$2.40 | \$1.30 | \$2.40 | \$1.30 | \$2.40 | \$1.30 | \$2.50 | \$1.30 | \$2.50 | \$1.30 |
| January 24, 1994 | \$2.30 | \$1.10 | \$2.30 | \$1.20 | \$2.40 | \$1.20 | \$2.50 | \$1.20 | \$2.50 | \$1.30 | \$2.60 | \$1.30 | \$2.70 | \$1.40 | \$2.70 | \$1.40 | \$2.70 | \$1.40 |
| April 4, 1994 | \$2.30 | \$1.10 | \$2.30 | \$1.20 | \$2.40 | \$1.20 | \$2.50 | \$1.20 | \$2.50 | \$1.20 | \$2.60 | \$1.30 | \$2.70 | \$1.40 | \$2.70 | \$1.40 | \$2.70 | \$1.40 |
| April 20, 1994 | \$2. | 1.10 | \$2.30 | . 20 | \$2.4 | \$1.20 | \$2.50 | \$1.20 | \$2.50 | \$1.20 | \$2.60 | \$1.20 | \$2.70 | \$1.40 | \$2.70 | \$1.40 | \$2.7 | \$1.40 |
| December 16, 1994 | \$2.40 | \$1.20 | \$2.40 | \$1.30 | \$2.50 | \$1.30 | \$2.60 | \$1.40 | \$2.70 | \$1.40 | \$2.70 | \$1.40 | \$2.70 | \$1.40 | \$2.70 | \$1.40 | \$2.80 | \$1.50 |
| February 17, 1996 | \$2.50 | \$1.20 | \$2.60 | \$1.30 | \$2.70 | \$1.30 | \$2.70 | \$1.40 | \$2.80 | \$1.40 | \$2.80 | \$1.40 | \$2.80 | \$1.50 | \$2.80 | \$1.50 | \$3.00 | \$1.60 |
| December 1, 1996 | \$2.60 | \$1.30 | \$2.80 | \$1.30 | \$2.80 | \$1.30 | \$2.80 | \$1.50 | \$2.90 | \$1.50 | \$3.00 | \$1.50 | \$3.00 | \$1.60 | \$3.00 | \$1.60 | \$3.10 | \$1.60 |

Figure 24


Figure 25
AT\&T Average Residential
Nightime Discount


Table 13 and Figure 23 are based on published rates. A dollar in 1927, however, was worth considerably more than a dollar today. Figure 24 shows the rate trends in constant January 1996 dollars. Measured in today's dollars, a ten minute coast to coast call cost slightly over \$250 in 1927.

The December 1927 rate schedule established day rates for calls placed between 4:30 am and 7:00 pm, evening rates for calls placed between 7:00 pm and 8:30 pm , and night rates for calls placed between 8:30 pm and 4:30 am. The discount periods changed considerably over time. AT\&T combined the evening and night periods in 1935. In 1963, AT\&T reintroduced an evening rate period of 6:00 pm to 9:00 pm. AT\&T did not offer discounts on daytime Saturday calls until 1965. Some subsequent schedules had two discount periods in the evening hours as well as a night rate period. The March 1975 tariff initiated the day, evening, and night periods now in use and instituted fixed percentage discounts -- 35\% for evening calls and $60 \%$ for night calls. AT\&T stopped using percentage discounts in 1989 and now publishes separate day, evening, and night rates. Figure 25 shows the maximum percentage discount offered by year.

In addition to the night and evening discount rates, many long distance carriers offer other discount plans as well. Although normally directed to the high volume users, many of the plans offer discounts to those who spend as little as $\$ 10$ per month on long distance. There are numerous providers of long distance service.

The following discussion focuses on the discount plans of AT\&T, MCI, and Sprint as of December 1996. Each of these three providers have several different discount plans available, depending on the type of customer and their calling patterns. Residential customers can choose their optimal calling plan from any of a number of plans depending on their volume of calls, the time of day they normally make the calls, and where the calls are placed to. The domestic discount plans are normally free to any presubscribed customer, while the international plans often have a small charge to receive the best discounts. For example, for domestic calls AT\&T and MCl both give percentage discounts off their basic rates if a consumer spends more than $\$ 10$ per month. Sprint changed in 1994 to offer, as their main discount plan, a flat rate per minute for calls anywhere in the United States, with rates differing only by time of day. This plan, known as Sprint Sense, charges 25 cents per minute for daytime calls during the week and 10 cents per minute at all other times. Both AT\&T and MCl have recently begun offering similar plans. The AT\&T plan, known as AT\&T One Rate charges 15 cents per minute for interstate calls regardless of the time of day, as does the MCl plan, known as MCl Minutes. In addition, many long distance companies are now offering additional discounts, rebates, or bonuses to customers who maintain the company as their primary interexchange carrier (PIC) for more than 7 to 12 months.

These discount plans are available to all consumers who call and request the plans. However, the customer must have chosen that carrier as their long distance company and request the plan. Many consumers do not receive these discounts simply because they have not asked their long distance provider for them. For a user spending \$10-\$15 per month, the savings over the course of a year currently amount to approximately $\$ 25-\$ 40$. High end users may see substantial savings in their total long distance expenditures as a result of these discounts. How much a consumer benefits from a discount plan depends on their calling patterns and the plan they choose.

One characteristic of discount plans is that they are continually changing. However, consumers are often allowed to remain on their existing discount plan, even though the plan is not accepting new members and the company is promoting another plan. Generally, carriers do not automatically switch customers to new or more desirable plans.

Special promotions are even more fleeting and change more often, making it difficult to keep track of the most recent offerings. However, some of these promotions result in substantial savings. These special promotions sometimes may be used in conjunction with other discount plans. Promotions usually run 90 days, but at times are continued for longer periods of time. In any event, it is important for the consumer to be aware of whether the promotion is in conjunction with their discount plan or instead of, as long term savings may be greater without the special promotion.

In addition to the discount plans and promotions offered by the major IXCs, consumers can find competitive rates offered by resellers, aggregators, and dial-around carriers. The key to saving on long distance charges lies in understanding the types of
calls being placed and choosing the calling plan of the carrier that offers low rates on these calls.

AT\&T's basic MTS rate schedule provides separate rates for the initial period and for additional minutes. The initial period is currently a minute, and the charge is currently the same as the charge for additional minutes. Prior to 1975, however, customers were billed for minimum call lengths of 3 or more minutes even if the call lasted only a few seconds. In some cases, additional period rates covered 2 or more minutes. Furthermore, before 1990, the per

Figure 26
First Minute Premium in
AT\&T Basic Residential Rates


Figure 27
 minute initial period rate usually exceeded the rate for additional minutes. The difference between the rate for the initial period and the overtime period has varied dramatically over time. To permit comparisons over time, an initial minute premium was calculated as the initial period rate minus the per minute additional minute rate times the number of minutes in the initial period. Figure 26 shows how this premium changed over time. The figure shows average premiums for shorter distances -- representing an average premium for the four lowest mileages in Table 13, and for longer distances -- representing an average for the five highest mileages in Table 13. Some competing carriers bill in 6 second increments, as opposed to 1 minute increments, while others bill a minimum of three minutes on all calls.

Directly dialed rates rose rapidly in the 1970s and then fell dramatically in the 1980s. This is illustrated in Figure 27, which shows three alternative measures of interstate toll rates. The first measure is the unweighted average cost of ten minute day rate and night rate calls for the three middle mileage bands. This average fell
about $40 \%$ between 1984 and 1990. This is probably representative of the overall decline of direct dial rates between these years. The graph also shows the CPI and PPI for interstate service, rebased to appear on the same scale. These indices have not fallen as much, since they cover charges for operator services as well as the charges for directly dialed calls. Operator service rates have tended to increase over time. Undiscounted direct dial rates have been increasing since 1992. The CPI, which now includes discount plans in its sample, shows lower increases since 1992, than do the PPI or the rate averages.

Figure 28


Figure 28 shows the PPI for interstate, intrastate, and international MTS. Interstate and intrastate service largely have followed the same broad rate trends. The indices rose by similar amounts from 1972 through divestiture. Interstate rates declined rapidly in the years right after divestiture, in part because of the federal access charge policies. The most significant difference between interstate and intrastate rate changes has been due to the separations process prior to 1984, and the FCC's access charge policies thereafter.

Figure 28 shows that the PPI for international MTS has not followed the same pattern as the PPI for interstate MTS and intrastate MTS. Appendix 7 explains that the international MTS index is not a pure measure of rates, since it also reflects the revenue effects of changes in international accounting rate agreements and international exchange rates. For example, the large decline in the PPI international index in 1993 appears due primarily to currency rate fluctuations. Trends in the International Communications Industry, Industry Analysis Division, August 1996, provides additional information on long term trends in international MTS rates.

Figure 29


Figure 30
Comparison of Historic Telephone
and Postage Rates


Over the long term, telephone service rates have risen more slowly than rates for most other goods and services, including postal service. The BLS maintains price indices for Telephone Services and for Postal Services as part of the CPI program. Figure 29 shows these indices from 1935 to the present. For residential customers, the overall cost of postal service has been rising at a much faster rate since about 1970 than before 1970. The cost of telephone service began increasing more rapidly in the 1980s, following a period of high inflation in the economy, and has increased more modestly since then.

Figure 30 compares the cost of a first class letter with the AT\&T charges per minute for a coast to coast call. The comparisons are based on day rates for ten minute calls. In 1930, the cost per minute for a 200 mile call was about 10 times the cost of sending a first class letter. The cost per minute for a coast to coast call was about 100 times as expensive as a letter. At that time, however, telephone customers were charged for a 3 minute initial period. Thus in 1930, a day time coast to coast call would cost a minimum of $\$ 7.50$ compared with three cents for a first class letter. Today, it costs residential customers that are not enrolled in a discount plan between 26 cents and 32 cents per minute to make a day rate call within the continental United States, and between 13 cents and 17 cents per minute to make a night rate call. A first class letter now costs 32 cents.

Most of the information presented in this section concerns AT\&T's basic schedule rates. AT\&T's share of interstate switched access minutes has declined from $85 \%$ in 1984 to around $53 \%$ today. Appendix 10 compares AT\&T's basic schedule rates with MCI and Sprint basic schedule rates. Figure 31 compares short haul rates ( 5,16 , and 39 mile
calls), Figure 32 compares medium haul rates (90, 200, and 334 mile calls), and Figure 33 compares long haul rates ( 678,1418 , and 2455 mile calls).

Figure 31
Residential Rate for a
10-minute Short Distance Call


Figure 32
Residential Rate for a
10-minute Medium Distance Call


In 1980, MCI and Sprint had inferior access to the local switched network, paid significantly less than AT\&T to originate and terminate calls, and generally had lower basic schedule rates. With the implementation of equal access, these carriers' basic schedule rates rapidly converged on AT\&T's basic schedule rates. The CPI and PPI interstate MTS indices, which primarily track basic schedule rates, would show the same pattern of changes since divestiture if they fully weighted AT\&T's competitors. However, the CPI and PPI MTS indices would have shown greater rate decreases since divestiture if the samples had greater coverage of discount rates. This reflects the fact that the interexchange carriers have increasingly attempted to attract customers by offering discount plans to customers with large toll bills.

Figure 33


|  | Appendix Table A1-1 Consumer | 1: BLS P <br> Price Indice | Indices $(1982-1984=100)$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | All Goods \& Services | All <br> Telephone Services |  | All Goods \& Services | All Telephone Services |
| 1972 January | 41.1 | 63.3 | 1975 January | 52.1 | 69.8 |
| February | 41.3 | 64.4 | February | 52.5 | 70.1 |
| March | 41.4 | 64.4 | March | 52.7 | 70.7 |
| April | 41.5 | 64.5 | April | 52.9 | 70.9 |
| May | 41.6 | 64.7 | May | 53.2 | 71.2 |
| June | 41.7 | 65.1 | June | 53.6 | 71.8 |
| July | 41.9 | 65.2 | July | 54.2 | 71.9 |
| August | 42.0 | 65.4 | August | 54.3 | 72.2 |
| September | 42.1 | 65.6 | September | 54.6 | 72.4 |
| October | 42.3 | 65.8 | October | 54.9 | 72.6 |
| November | 42.4 | 65.8 | November | 55.3 | 73.7 |
| December | 42.5 | 65.9 | December | 55.5 | 73.8 |
| 1973 January | 42.6 | 65.6 | 1976 January | 55.6 | 73.3 |
| February | 42.9 | 65.9 | February | 55.8 | 73.4 |
| March | 43.3 | 66.0 | March | 55.9 | 73.8 |
| April | 43.6 | 66.2 | April | 56.1 | 73.8 |
| May | 43.9 | 66.2 | May | 56.5 | 73.9 |
| June | 44.2 | 66.4 | June | 56.8 | 74.0 |
| July | 44.3 | 66.4 | July | 57.1 | 74.1 |
| August | 45.1 | 67.0 | August | 57.4 | 75.0 |
| September | 45.2 | 67.1 | September | 57.6 | 74.9 |
| October | 45.6 | 67.3 | October | 57.9 | 75.0 |
| November | 45.9 | 67.3 | November | 58.0 | 75.3 |
| December | 46.2 | 69.0 | December | 58.2 | 75.3 |
| 1974 January | 46.6 | 69.2 | 1977 January | 58.5 | 74.5 |
| February | 47.2 | 69.3 | February | 59.1 | 74.7 |
| March | 47.8 | 69.3 | March | 59.5 | 74.8 |
| April | 48.0 | 69.4 | April | 60.0 | 75.0 |
| May | 48.6 | 69.4 | May | 60.3 | 75.0 |
| June | 49.0 | 69.4 | June | 60.7 | 75.1 |
| July | 49.4 | 69.4 | July | 61.0 | 75.1 |
| August | 50.0 | 69.4 | August | 61.2 | 75.3 |
| September | 50.6 | 69.9 | September | 61.4 | 75.4 |
| October | 51.1 | 69.9 | October | 61.6 | 75.5 |
| November | 51.5 | 69.9 | November | 61.9 | 75.6 |
| December | 51.9 | 69.9 | December | 62.1 | 75.7 |


| Appendix 1: BLS Price Indices <br> Table A1-1 <br> Consumer Price Indices (1982-1984 = 100) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | All Goods \& Services | All <br> Telephone Services | Local Services | Interstate Toll Service | Intrastate Toll Service |
| 1977 December | 62.1 | 75.7 | 69.2 | 83.4 | 85.4 |
| 1978 January | 62.5 | 75.7 | 69.2 | 82.9 | 85.5 |
| February | 62.9 | 75.8 | 69.8 | 82.7 | 84.9 |
| March | 63.4 | 75.8 | 69.7 | 82.7 | 85.1 |
| April | 63.9 | 76.0 | 70.0 | 82.6 | 85.6 |
| May | 64.5 | 76.0 | 69.9 | 82.6 | 85.5 |
| June | 65.2 | 76.0 | 69.9 | 82.7 | 85.5 |
| July | 65.7 | 76.1 | 70.1 | 82.7 | 85.5 |
| August | 66.0 | 76.3 | 70.4 | 82.7 | 85.6 |
| September | 66.5 | 76.3 | 70.5 | 82.7 | 85.7 |
| October | 67.1 | 76.2 | 70.1 | 82.7 | 85.6 |
| November | 67.4 | 76.2 | 70.2 | 82.7 | 85.6 |
| December | 67.7 | 76.4 | 70.2 | 82.7 | 86.5 |
| 1979 January | 68.3 | 75.9 | 69.6 | 82.3 | 86.1 |
| February | 69.1 | 75.7 | 69.5 | 82.1 | 86.0 |
| March | 69.8 | 75.7 | 69.4 | 82.0 | 86.0 |
| April | 70.6 | 75.7 | 69.4 | 82.0 | 86.0 |
| May | 71.5 | 75.7 | 69.6 | 82.0 | 86.0 |
| June | 72.3 | 75.6 | 69.2 | 82.1 | 86.4 |
| July | 73.1 | 75.7 | 69.2 | 82.1 | 86.5 |
| August | 73.8 | 75.9 | 69.5 | 82.2 | 86.6 |
| September | 74.6 | 75.8 | 69.4 | 82.1 | 86.6 |
| October | 75.2 | 75.1 | 68.3 | 82.1 | 86.8 |
| November | 75.9 | 76.4 | 70.4 | 82.1 | 86.6 |
| December | 76.7 | 76.9 | 71.4 | 82.1 | 86.6 |
| 1980 January | 77.8 | 76.4 | 71.0 | 81.5 | 86.0 |
| February | 78.9 | 76.1 | 71.0 | 81.2 | 84.3 |
| March | 80.0 | 76.3 | 71.4 | 81.2 | 84.3 |
| April | 81.0 | 76.4 | 71.6 | 81.2 | 84.5 |
| May | 81.8 | 76.8 | 72.1 | 81.2 | 84.9 |
| June | 82.7 | 77.6 | 72.8 | 83.0 | 85.0 |
| July | 82.7 | 78.1 | 72.9 | 84.7 | 84.9 |
| August | 83.3 | 78.2 | 72.9 | 85.0 | 85.3 |
| September | 84.0 | 78.5 | 73.3 | 85.2 | 85.5 |
| October | 84.8 | 78.8 | 73.7 | 85.2 | 85.5 |
| November | 85.5 | 79.4 | 74.9 | 84.8 | 85.9 |
| December | 86.3 | 80.4 | 76.4 | 84.9 | 86.1 |
| 1981 January | 87.0 | 80.8 | 77.2 | 84.9 | 86.2 |
| February | 87.9 | 81.6 | 78.5 | 84.9 | 86.4 |


| Appendix 1: BLS Price Indices <br> Table A1-1 <br> Consumer Price Indices (1982-1984 = 100) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | All Goods \& Services | All Telephone Services | Local Services | Interstate Toll Service | Intrastate Toll Service |
| March | 88.5 | 81.6 | 78.6 | 84.9 | 86.4 |
| April | 89.1 | 82.1 | 79.4 | 84.9 | 86.6 |
| May | 89.8 | 82.5 | 79.9 | 84.9 | 86.8 |
| June | 90.6 | 82.2 | 79.5 | 84.9 | 86.6 |
| July | 91.6 | 84.3 | 80.7 | 91.0 | 86.6 |
| August | 92.3 | 85.5 | 81.1 | 94.6 | 86.9 |
| September | 93.2 | 87.3 | 83.3 | 95.8 | 88.7 |
| October | 93.4 | 88.4 | 84.0 | 97.3 | 90.1 |
| November | 93.7 | 89.1 | 85.4 | 97.3 | 89.9 |
| December | 94.0 | 89.8 | 86.0 | 97.3 | 91.4 |
| 1982 January | 94.3 | 90.0 | 85.8 | 97.4 | 93.2 |
| February | 94.6 | 90.4 | 86.7 | 97.3 | 93.1 |
| March | 94.5 | 90.8 | 86.9 | 98.2 | 93.0 |
| April | 94.9 | 92.1 | 88.5 | 100.0 | 93.0 |
| May | 95.8 | 92.6 | 89.2 | 100.1 | 93.3 |
| June | 97.0 | 93.5 | 90.7 | 99.8 | 93.7 |
| July | 97.5 | 93.8 | 91.2 | 99.8 | 93.9 |
| August | 97.7 | 94.0 | 91.6 | 99.8 | 93.9 |
| September | 97.9 | 94.8 | 92.9 | 99.8 | 94.0 |
| October | 98.2 | 95.2 | 93.5 | 99.8 | 94.2 |
| November | 98.0 | 95.4 | 93.6 | 99.8 | 94.8 |
| December | 97.6 | 96.3 | 95.3 | 99.8 | 95.2 |
| 1983 January | 97.8 | 98.1 | 97.2 | 100.9 | 97.3 |
| February | 97.9 | 98.3 | 96.8 | 101.6 | 98.9 |
| March | 97.9 | 98.5 | 97.0 | 101.6 | 99.3 |
| April | 98.6 | 98.4 | 96.8 | 101.6 | 99.5 |
| May | 99.2 | 98.9 | 97.5 | 101.6 | 100.0 |
| June | 99.5 | 99.3 | 98.1 | 101.6 | 100.2 |
| July | 99.9 | 99.5 | 98.1 | 101.7 | 100.9 |
| August | 100.2 | 99.6 | 98.3 | 101.7 | 101.0 |
| September | 100.7 | 99.9 | 98.6 | 101.7 | 101.2 |
| October | 101.0 | 99.7 | 98.3 | 101.4 | 101.6 |
| November | 101.2 | 100.4 | 99.5 | 101.4 | 102.3 |
| December | 101.3 | 99.8 | 98.3 | 101.3 | 102.2 |
| 1984 January | 101.9 | 105.0 | 106.7 | 101.3 | 104.2 |
| February | 102.4 | 107.0 | 110.0 | 102.1 | 104.2 |
| March | 102.6 | 106.4 | 109.1 | 102.1 | 104.1 |
| April | 103.1 | 106.7 | 109.1 | 102.0 | 105.6 |
| May | 103.4 | 106.9 | 109.5 | 102.3 | 105.1 |


| Appendix 1: BLS Price Indices <br> Table A1-1 <br> Consumer Price Indices (1982-1984 = 100) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | All Goods \& Services | All <br> Telephone Services | Local Services | Interstate Toll Service | Intrastate Toll Service |
| June | 103.7 | 107.1 | 110.7 | 98.9 | 106.5 |
| July | 104.1 | 107.7 | 112.3 | 96.9 | 107.5 |
| August | 104.5 | 107.9 | 112.9 | 96.8 | 106.6 |
| September | 105.0 | 108.7 | 114.3 | 96.8 | 106.5 |
| October | 105.3 | 108.8 | 114.5 | 97.0 | 106.5 |
| November | 105.3 | 109.4 | 115.4 | 96.9 | 107.1 |
| December | 105.3 | 109.0 | 115.2 | 96.9 | 105.9 |
| 1985 January | 105.5 | 109.3 | 115.6 | 96.9 | 105.9 |
| February | 106.0 | 108.3 | 113.8 | 96.9 | 105.8 |
| March | 106.4 | 109.5 | 116.0 | 96.9 | 106.1 |
| April | 106.9 | 109.4 | 115.8 | 96.9 | 106.0 |
| May | 107.3 | 109.6 | 116.0 | 97.4 | 105.8 |
| June | 107.6 | 112.1 | 121.3 | 94.7 | 106.2 |
| July | 107.8 | 112.9 | 123.0 | 93.1 | 107.5 |
| August | 108.0 | 113.6 | 123.9 | 93.3 | 107.8 |
| September | 108.3 | 113.7 | 124.2 | 93.3 | 107.8 |
| October | 108.7 | 113.8 | 124.3 | 93.3 | 108.0 |
| November | 109.0 | 114.2 | 125.2 | 93.3 | 107.9 |
| December | 109.3 | 114.1 | 125.5 | 93.3 | 106.5 |
| 1986 January | 109.6 | 114.6 | 126.2 | 93.3 | 106.7 |
| February | 109.3 | 114.8 | 126.4 | 93.3 | 107.0 |
| March | 108.8 | 115.3 | 127.2 | 93.3 | 107.1 |
| April | 108.6 | 116.5 | 129.5 | 93.3 | 106.8 |
| May | 108.9 | 116.5 | 129.5 | 93.3 | 106.9 |
| June | 109.5 | 118.7 | 135.6 | 88.0 | 106.7 |
| July | 109.5 | 118.7 | 137.0 | 84.7 | 106.7 |
| August | 109.7 | 118.8 | 137.2 | 84.4 | 107.0 |
| September | 110.2 | 118.3 | 136.5 | 84.4 | 106.5 |
| October | 110.3 | 118.9 | 137.5 | 84.4 | 106.8 |
| November | 110.4 | 117.6 | 135.1 | 84.4 | 106.5 |
| December | 110.5 | 117.2 | 134.4 | 84.5 | 106.8 |
| 1987 January | 111.2 | 116.6 | 137.6 | 77.1 | 107.0 |
| February | 111.6 | 116.4 | 137.5 | 77.1 | 106.4 |
| March | 112.1 | 116.4 | 137.4 | 77.1 | 106.4 |
| April | 112.7 | 116.7 | 138.2 | 77.0 | 106.3 |
| May | 113.1 | 116.4 | 138.1 | 76.7 | 105.2 |
| June | 113.5 | 115.6 | 137.5 | 76.7 | 102.7 |
| July | 113.8 | 116.6 | 141.0 | 73.4 | 104.0 |
| August | 114.4 | 117.0 | 141.9 | 73.4 | 103.8 |


| Appendix 1: BLS Price Indices <br> Table A1-1 <br> Consumer Price Indices (1982-1984 = 100) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | All Goods \& Services | All <br> Telephone Services | Local Services | Interstate Toll Service | Intrastate Toll Service |
| September | 115.0 | 116.6 | 140.9 | 73.7 | 103.5 |
| October | 115.3 | 117.0 | 141.3 | 73.7 | 104.1 |
| November | 115.4 | 116.9 | 141.4 | 73.7 | 103.6 |
| December | 115.4 | 115.7 | 138.9 | 74.0 | 103.6 |
| 1988 January | 115.7 | 115.8 | 139.9 | 72.2 | 104.1 |
| February | 116.0 | 116.6 | 141.6 | 72.2 | 103.6 |
| March | 116.5 | 116.2 | 141.1 | 72.0 | 103.2 |
| April | 117.1 | 116.6 | 142.0 | 72.1 | 102.9 |
| May | 117.5 | 116.6 | 142.0 | 72.1 | 102.8 |
| June | 118.0 | 115.8 | 140.8 | 72.1 | 102.3 |
| July | 118.5 | 115.8 | 141.4 | 72.1 | 100.3 |
| August | 119.0 | 114.8 | 139.4 | 72.1 | 100.3 |
| September | 119.8 | 115.6 | 140.6 | 73.1 | 100.0 |
| October | 120.2 | 115.8 | 141.1 | 73.1 | 99.4 |
| November | 120.3 | 115.7 | 140.9 | 73.1 | 99.4 |
| December | 120.5 | 117.2 | 145.2 | 70.9 | 99.2 |
| 1989 January | 121.1 | 116.8 | 145.0 | 70.9 | 97.4 |
| February | 121.6 | 116.6 | 144.7 | 70.8 | 97.4 |
| March | 122.3 | 116.2 | 144.1 | 70.8 | 96.9 |
| April | 123.1 | 117.2 | 146.6 | 70.0 | 96.8 |
| May | 123.8 | 117.9 | 147.8 | 69.8 | 97.4 |
| June | 124.1 | 117.6 | 147.2 | 69.8 | 97.4 |
| July | 124.4 | 117.8 | 147.8 | 69.6 | 97.0 |
| August | 124.6 | 117.7 | 147.6 | 69.6 | 97.0 |
| September | 125.0 | 117.8 | 147.9 | 69.6 | 96.9 |
| October | 125.6 | 116.9 | 146.2 | 69.6 | 96.7 |
| November | 125.9 | 117.2 | 146.8 | 69.6 | 96.8 |
| December | 126.1 | 116.9 | 146.0 | 70.0 | 96.6 |
| 1990 January | 127.4 | 117.6 | 148.4 | 69.1 | 95.2 |
| February | 128.0 | 117.9 | 149.0 | 69.0 | 95.1 |
| March | 128.4 | 118.2 | 149.7 | 69.0 | 95.0 |
| April | 128.9 | 118.4 | 150.0 | 69.0 | 95.1 |
| May | 129.2 | 118.0 | 149.2 | 69.0 | 95.2 |
| June | 129.9 | 118.0 | 149.2 | 69.0 | 95.3 |
| July | 130.4 | 115.5 | 145.4 | 67.4 | 95.4 |
| August | 130.6 | 117.7 | 149.7 | 67.4 | 95.3 |
| September | 132.7 | 117.9 | 150.1 | 67.4 | 95.2 |
| October | 133.5 | 118.6 | 151.4 | 67.4 | 94.8 |
| November | 133.8 | 118.6 | 151.4 | 67.4 | 94.7 |


| Appendix 1: BLS Price Indices <br> Table A1-1 <br> Consumer Price Indices $\quad(1982-1984=100)$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | All Goods \& Services | All <br> Telephone Services | Local Services | Interstate Toll Service | Intrastate Toll Service |
| December | 133.8 | 116.4 | 147.5 | 67.4 | 94.5 |
| 1991 January | 134.6 | 119.3 | 153.4 | 67.1 | 93.4 |
| February | 134.8 | 119.2 | 153.2 | 67.1 | 93.4 |
| March | 135.0 | 119.3 | 153.2 | 67.5 | 93.3 |
| April | 135.2 | 119.3 | 153.4 | 67.5 | 92.9 |
| May | 135.6 | 119.3 | 153.6 | 67.5 | 92.6 |
| June | 136.0 | 119.5 | 153.6 | 67.5 | 93.1 |
| July | 136.2 | 119.6 | 153.8 | 67.5 | 93.2 |
| August | 136.6 | 119.7 | 154.1 | 67.5 | 93.2 |
| September | 137.2 | 119.9 | 154.2 | 68.0 | 93.1 |
| October | 137.4 | 120.0 | 154.5 | 68.0 | 92.9 |
| November | 137.8 | 120.4 | 155.0 | 68.2 | 93.3 |
| December | 137.9 | 120.5 | 155.0 | 68.3 | 93.1 |
| 1992 January | 138.1 | 120.8 | 155.8 | 68.6 | 92.5 |
| February | 138.6 | 120.8 | 155.8 | 68.6 | 92.2 |
| March | 139.3 | 120.9 | 156.2 | 68.6 | 91.8 |
| April | 139.5 | 120.8 | 156.2 | 68.6 | 91.4 |
| May | 139.7 | 120.8 | 156.2 | 68.6 | 91.4 |
| June | 140.2 | 119.9 | 154.7 | 68.2 | 91.2 |
| July | 140.5 | 120.3 | 155.7 | 67.5 | 91.4 |
| August | 140.9 | 120.1 | 155.4 | 67.6 | 91.2 |
| September | 141.3 | 120.0 | 155.3 | 67.4 | 91.1 |
| October | 141.8 | 120.0 | 155.4 | 67.4 | 91.0 |
| November | 142.0 | 120.0 | 155.4 | 67.4 | 90.9 |
| December | 141.9 | 120.1 | 155.7 | 67.4 | 90.9 |
| 1993 January | 142.6 | 120.7 | 156.4 | 68.3 | 90.6 |
| February | 143.1 | 120.7 | 156.3 | 68.3 | 90.6 |
| March | 143.6 | 120.9 | 156.3 | 69.0 | 90.7 |
| April | 144.0 | 120.3 | 155.3 | 69.0 | 90.5 |
| May | 144.2 | 120.9 | 156.3 | 69.0 | 90.6 |
| June | 144.4 | 120.7 | 156.0 | 69.0 | 90.3 |
| July | 144.4 | 121.0 | 156.2 | 69.3 | 90.7 |
| August | 144.8 | 121.2 | 156.3 | 70.1 | 90.7 |
| September | 145.1 | 121.6 | 156.7 | 70.3 | 90.9 |
| October | 145.7 | 121.8 | 156.8 | 70.8 | 91.0 |
| November | 145.8 | 121.9 | 157.0 | 70.8 | 91.0 |
| December | 145.8 | 122.3 | 157.2 | 71.8 | 91.1 |
| 1994 January | 146.2 | 122.0 | 156.8 | 71.8 | 90.5 |
| February | 146.7 | 123.3 | 156.9 | 75.6 | 90.5 |


|  |  | Appendix 1: BLS Price Indices <br> Table A1-1 <br> Consumer Price Indices $(1982-1984=100)$ |  |  |  | Intrastate Toll Service |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | All Goods \& Services | $\begin{gathered} \text { All } \\ \text { Telephone } \\ \text { Services } \end{gathered}$ | Local Services | Interstate Toll Service |  |
| 1995 | March | 147.2 | 123.2 | 156.9 | 75.6 | 90.2 |
|  | April | 147.4 | 123.0 | 156.8 | 75.3 | 90.0 |
|  | May | 147.5 | 123.1 | 157.0 | 75.2 | 90.0 |
|  | June | 148.0 | 123.3 | 157.2 | 75.3 | 90.3 |
|  | July | 148.4 | 123.2 | 157.1 | 75.3 | 90.3 |
|  | August | 149.0 | 123.3 | 157.1 | 75.6 | 90.3 |
|  | September | 149.4 | 123.3 | 156.9 | 75.7 | 90.3 |
|  | October | 149.5 | 123.2 | 156.9 | 75.7 | 90.2 |
|  | November | 149.7 | 123.1 | 156.6 | 75.7 | 90.1 |
|  | December | 149.7 | 123.1 | 156.7 | 75.7 | 90.2 |
|  | January | 150.3 | 124.7 | 160.9 | 76.3 | 85.9 |
|  | February | 150.9 | 123.8 | 160.4 | 74.3 | 85.6 |
|  | March | 151.4 | 123.6 | 160.1 | 74.1 | 85.5 |
|  | April | 151.9 | 123.7 | 160.0 | 74.9 | 85.5 |
|  | May | 152.2 | 123.5 | 159.5 | 74.9 | 85.7 |
|  | June | 152.5 | 124.0 | 160.5 | 74.9 | 85.5 |
|  | July | 152.5 | 124.1 | 160.4 | 74.9 | 86.2 |
|  | August | 152.9 | 123.9 | 160.2 | 74.9 | 86.0 |
|  | September | 153.2 | 124.1 | 160.5 | 74.9 | 86.1 |
|  | October | 153.7 | 124.2 | 160.5 | 74.9 | 86.8 |
|  | November | 153.6 | 124.1 | 160.6 | 74.4 | 86.7 |
|  | December | 153.5 | 124.6 | 160.7 | 75.8 | 86.8 |
| 1996 | January | 154.4 | 124.7 | 160.6 | 75.8 | 87.2 |
|  | February | 154.9 | 124.7 | 160.7 | 75.8 | 87.2 |
|  | March | 155.7 | 125.4 | 160.6 | 78.0 | 87.5 |
|  | April | 156.3 | 123.5 | 156.8 | 78.0 | 88.0 |
|  | May | 156.6 | 125.4 | 160.3 | 78.0 | 88.6 |
|  | June | 156.7 | 126.0 | 161.0 | 78.4 | 88.9 |
|  | July | 157.2 | 126.2 | 161.3 | 78.4 | 89.1 |
|  | August | 157.4 | 126.5 | 161.3 | 78.4 | 90.9 |
|  | September | 157.8 | 126.7 | 161.4 | 78.6 | 91.0 |
|  | October | 158.3 | 126.9 | 161.9 | 78.6 | 91.0 |
|  | November | 158.6 | 127.0 | 161.9 | 78.6 | 91.3 |
|  | December | 158.6 | 127.2 | 162.1 | 78.6 | 92.1 |
| 1997 | January | 159.1 | 127.6 | 161.7 | 80.4 | 91.9 |


| Appendix 1: BLS Price Indices Table A1-2 <br> Discontinued Producer Price Indexes ( $1972=100)$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Finished Goods | Local Services | Local Residential Services | Local Business Services | Local Optional Additional Usage |
| 1972 January | 98.6 | 98.1 | 97.7 | 97.8 | 99.5 |
| February | 99.0 | 99.1 | 98.9 | 98.7 | 100.4 |
| March | 99.0 | 99.1 | 98.9 | 98.7 | 100.4 |
| April | 98.8 | 99.7 | 99.5 | 99.8 | 100.4 |
| May | 99.3 | 100.6 | 100.7 | 100.7 | 100.4 |
| June | 99.8 | 100.8 | 100.9 | 100.8 | 100.9 |
| July | 100.5 | 100.8 | 100.9 | 100.8 | 100.9 |
| August | 100.5 | 99.6 | 99.7 | 99.3 | 99.4 |
| September | 100.7 | 100.5 | 100.7 | 100.8 | 99.4 |
| October | 100.2 | 100.5 | 100.7 | 100.9 | 99.4 |
| November | 101.0 | 100.5 | 100.7 | 100.9 | 99.4 |
| December | 101.9 | 100.5 | 100.7 | 100.9 | 99.4 |
| 1973 January | 103.1 | 100.8 | 101.0 | 101.2 | 99.7 |
| February | 104.5 | 101.3 | 101.5 | 102.0 | 99.8 |
| March | 106.2 | 101.5 | 101.6 | 102.6 | 99.8 |
| April | 106.9 | 101.9 | 102.0 | 103.4 | 99.9 |
| May | 107.7 | 101.9 | 102.0 | 103.4 | 99.9 |
| June | 108.6 | 101.9 | 102.0 | 103.4 | 99.9 |
| July | 108.9 | 101.9 | 102.0 | 103.4 | 99.9 |
| August | 112.4 | 102.9 | 103.0 | 104.2 | 101.0 |
| September | 112.0 | 102.9 | 103.0 | 104.3 | 101.0 |
| October | 112.0 | 104.8 | 105.2 | 106.5 | 101.1 |
| November | 112.4 | 104.8 | 105.2 | 106.5 | 101.1 |
| December | 113.9 | 105.9 | 106.7 | 107.3 | 101.1 |
| 1974 January | 117.2 | 107.4 | 108.1 | 109.2 | 103.3 |
| February | 119.4 | 107.7 | 108.3 | 109.8 | 103.6 |
| March | 120.1 | 107.7 | 108.3 | 109.8 | 103.6 |
| April | 121.1 | 107.7 | 108.3 | 109.8 | 103.6 |
| May | 122.5 | 107.7 | 108.3 | 109.8 | 103.6 |
| June | 122.7 | 107.7 | 108.3 | 109.8 | 103.6 |
| July | 126.3 | 107.7 | 108.3 | 109.9 | 103.6 |
| August | 128.5 | 109.2 | 109.4 | 112.2 | 106.0 |
| September | 129.7 | 109.2 | 109.3 | 112.4 | 106.0 |
| October | 132.3 | 109.6 | 109.7 | 113.4 | 106.0 |
| November | 134.4 | 109.6 | 109.7 | 113.4 | 106.0 |
| December | 134.7 | 109.6 | 109.7 | 113.4 | 106.0 |
| 1975 January | 135.9 | 109.8 | 109.9 | 113.6 | 106.1 |
| February | 135.9 | 111.4 | 112.0 | 115.2 | 106.1 |



Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes $\quad(1972=100)$

|  | Finished <br> Goods | Local <br> Services | Local <br> Residential <br> Services | Local <br> Business <br> Services | Local Optional <br> Additional <br> Usage |
| :--- | ---: | ---: | ---: | ---: | ---: |
| May | 165.8 | 120.9 | 121.0 | 124.5 | 117.6 |
| June | 167.0 | 120.9 | 121.0 | 124.5 | 117.6 |
| July | 168.4 | 120.9 | 121.0 | 124.5 | 117.6 |
| August | 167.9 | 122.0 | 122.2 | 126.2 | 117.6 |
| September | 169.1 | 123.7 | 124.2 | 128.8 | 117.7 |
| October | 171.3 | 123.7 | 124.2 | 128.8 | 117.7 |
| November | 172.0 | 123.7 | 124.2 | 128.8 | 117.7 |
| December | 173.9 | 124.3 | 124.2 | 128.8 | 117.7 |
| January | 176.3 | 124.3 | 124.0 | 128.8 | 117.7 |
| February | 178.5 | 123.9 | 123.6 | 128.2 | 117.7 |
| March | 179.7 | 123.0 | 122.5 | 127.5 | 117.7 |
| April | 181.6 | 123.0 | 122.5 | 127.5 | 117.7 |
| May | 182.8 | 123.0 | 122.5 | 127.5 | 117.7 |
| June | 183.5 | 123.0 | 122.5 | 127.5 | 117.7 |
| July | 185.4 | 123.0 | 122.5 | 127.5 | 117.7 |
| August | 186.6 | 123.3 | 122.8 | 127.8 | 117.7 |
| September | 189.5 | 123.9 | 123.5 | 128.8 | 117.7 |
| October | 192.6 | 124.4 | 124.0 | 129.5 | 117.7 |
| November | 194.3 | 124.4 | 124.0 | 129.5 | 117.7 |
| December | 196.2 | 126.1 | 126.2 | 131.6 | 117.7 |
| January | 199.8 | 125.3 | 125.3 | 130.4 | 117.7 |
| February | 202.6 | 125.4 | 125.3 | 130.4 | 117.7 |
| March | 204.5 | 125.4 | 125.4 | 130.5 | 117.7 |
| April | 206.5 | 126.0 | 125.9 | 130.9 | 119.4 |
| May | 207.4 | 126.2 | 126.3 | 131.3 | 118.3 |
| June | 208.9 | 126.2 | 126.3 | 131.3 | 118.3 |
| July | 212.4 | 126.2 | 126.3 | 131.3 | 118.3 |
| August | 214.4 | 126.2 | 126.3 | 131.4 | 118.3 |
| September | 214.4 | 127.2 | 127.4 | 133.0 | 118.3 |
| October | 217.7 | 130.4 | 131.6 | 136.7 | 118.3 |
| November | 218.4 | 132.5 | 134.5 | 138.2 | 118.3 |
| December | 219.4 | 133.0 | 135.1 | 139.2 | 118.3 |
| January | 222.5 | 133.4 | 135.6 | 139.6 | 118.5 |
| February | 224.4 | 135.3 | 137.0 | 141.4 | 123.1 |
| March | 226.8 | 135.6 | 137.3 | 141.6 | 123.1 |
| April | 228.9 | 136.3 | 138.2 | 142.8 | 123.1 |
| May | 229.9 | 138.0 | 140.0 | 144.1 | 123.8 |
| June | 230.6 | 138.0 | 140.0 | 144.1 | 123.8 |
|  |  |  |  |  |  |


| Appendix 1: BLS Price Indices Table A1-2 Discontinued Producer Price Indexes |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Finished Goods | Local Services | Local Residential Services | Local Business Services | Local Optional Additional Usage |
| July | 231.8 | 141.6 | 144.5 | 148.6 | 123.8 |
| August | 231.3 | 142.6 | 145.1 | 152.2 | 123.8 |
| September | 231.3 | 144.3 | 147.4 | 153.8 | 123.8 |
| October | 234.0 | 146.9 | 151.2 | 155.4 | 123.8 |
| November | 234.2 | 151.0 | 156.2 | 161.0 | 124.1 |
| December | 234.9 | 151.0 | 156.2 | 161.0 | 124.1 |
| 1982 January | 236.8 | 149.5 | 154.9 | 157.7 | 124.1 |
| February | 236.8 | 149.5 | 154.9 | 157.7 | 124.1 |
| March | 236.4 | 149.5 | 154.9 | 157.7 | 124.1 |
| April | 236.4 | 151.2 | 156.7 | 159.7 | 124.1 |
| May | 236.8 | 152.3 | 157.3 | 160.1 | 124.2 |
| June | 238.5 | 153.3 | 158.4 | 161.4 | 124.2 |
| July | 240.2 | 153.3 | 158.4 | 161.4 | 124.2 |
| August | 240.7 | 153.7 | 159.0 | 162.0 | 124.2 |
| September | 239.7 | 158.8 | 165.8 | 167.2 | 124.2 |
| October | 242.1 | 160.4 | 167.8 | 168.4 | 125.6 |
| November | 242.8 | 160.9 | 168.4 | 169.0 | 125.9 |
| December | 243.3 | 162.3 | 170.2 | 170.3 | 125.9 |
| 1983 January | 242.1 | 162.6 | 168.7 | 170.8 | 125.9 |
| February | 242.1 | 162.9 | 169.0 | 171.2 | 125.9 |
| March | 241.6 | 163.4 | 169.5 | 172.2 | 125.9 |
| April | 241.4 | 163.1 | 169.2 | 172.0 | 125.7 |
| May | 242.3 | 163.2 | 168.4 | 171.5 | 125.7 |
| June | 243.1 | 163.3 | 169.1 | 172.3 | 126.2 |
| July | 243.5 | 163.8 | 169.6 | 173.1 | 126.2 |
| August | 244.0 | 163.9 | 169.7 | 173.2 | 126.2 |
| September | 243.1 | 164.3 | 170.2 | 173.6 | 126.2 |
| October | 245.2 | 164.7 | 170.5 | 174.0 | 127.0 |
| November | 244.5 | 164.8 | 170.6 | 174.1 | 127.0 |
| December | 244.7 | 164.8 | 170.6 | 174.1 | 127.0 |
| 1984 January | 246.9 | 171.2 | 177.8 | 180.3 | 124.3 |
| February | 247.8 | 171.2 | 177.8 | 180.3 | 124.3 |
| March | 248.3 | 171.2 | 177.7 | 180.5 | 124.3 |
| April | 248.3 | 171.9 | 177.7 | 183.7 | 124.3 |
| May | 248.1 | 172.1 | 178.1 | 183.7 | 124.3 |
| June | 248.1 | 177.9 | 178.6 | 208.1 | 124.3 |
| July | 249.3 | 182.2 | 181.4 | 211.0 | 122.5 |
| August | 248.3 | 185.7 | 186.0 | 213.7 | 122.5 |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes ( $1972=100)$

|  | Finished <br> Goods | Local <br> Services | Local <br> Residential <br> Services | Local <br> Business <br> Services | Local Optional <br> Additional <br> Usage |
| :---: | ---: | ---: | ---: | ---: | ---: |
| September | 246.9 | 187.6 | 188.7 | 215.8 | 122.5 |
| October | 248.6 | 187.7 | 188.7 | 215.9 | 122.5 |
| November | 249.3 | 187.5 | 188.3 | 215.9 | 122.5 |
| December | 248.8 | 187.6 | 188.4 | 216.0 | 122.5 |
| 1985 January | 249.0 | 188.9 | 189.8 | 218.2 | 122.5 |
| February | 249.3 | 190.7 | 191.9 | 220.7 | 122.5 |
| March | 249.0 | 190.6 | 191.1 | 220.7 | 122.5 |
| April | 249.8 | 190.6 | 191.1 | 220.7 | 122.5 |
| May | 250.7 | 191.0 | 192.3 | 220.9 | 122.5 |
| June | 250.7 | 200.6 | 208.8 | 222.2 | 122.5 |
| July | 251.4 | 200.8 | 209.2 | 222.2 | 122.5 |
| August | 250.2 | 201.6 | 210.4 | 222.9 | 122.5 |
| September | 247.1 | 202.2 | 211.0 | 223.9 | 122.5 |
| October | 251.2 | 202.3 | 211.0 | 224.6 | 122.5 |
| November | 252.6 | 204.8 | 211.7 | 228.0 | 130.2 |
| December | 253.3 | 204.8 | 211.7 | 228.0 | 130.2 |
| January | 252.4 | 206.5 | 213.4 | 230.8 | 130.3 |
| February | 248.8 | 206.7 | 213.6 | 231.3 | 130.3 |
| March | 245.5 | 206.7 | 213.6 | 231.3 | 130.3 |
| April | 244.7 | 206.7 | 213.6 | 231.3 | 130.3 |
| May | 246.2 | 206.7 | 213.6 | 231.3 | 130.3 |
| June | 246.7 | 216.6 | 230.3 | 234.0 | 130.3 |
| July | 245.2 | 216.6 | 230.3 | 234.0 | 130.3 |
| August | 245.7 | 216.9 | 230.8 | 234.1 | 130.3 |
| September | 245.0 | 217.5 | 231.3 | 234.6 | 131.5 |
| October | 247.8 | 217.5 | 231.3 | 234.6 | 131.5 |
| November | 247.8 | 216.8 | 230.5 | 233.6 | 131.5 |
| December | 247.6 | 216.8 | 230.5 | 233.6 | 131.5 |
| January | 248.8 | 216.7 | 230.1 | 234.0 | 131.5 |
| February | 249.0 | 216.6 | 230.0 | 234.0 | 131.5 |
| March | 249.5 | 216.8 | 230.3 | 234.1 | 131.5 |
| April | 251.4 | 216.1 | 229.2 | 233.5 | 131.5 |
| Mayy | 252.2 | 216.1 | 229.2 | 233.5 | 131.5 |
| June | 252.4 | 216.1 | 229.2 | 233.5 | 131.5 |
| July | 253.6 | 220.1 | 236.6 | 232.7 | 131.5 |
| August | 253.3 | 219.9 | 236.6 | 232.0 | 131.5 |
| September | 252.9 | 219.3 | 236.6 | 231.9 | 127.8 |
| October | 254.1 | 219.3 | 236.6 | 231.8 | 127.8 |
|  |  |  |  |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes $\quad(1972=100)$

|  | Finished <br> Goods | Local <br> Services | Local <br> Residential <br> Services | Local <br> Business <br> Services | Local Optional <br> Additional <br> Usage |
| :---: | ---: | ---: | ---: | ---: | ---: |
| November | 254.3 | 219.3 | 236.6 | 231.8 | 127.8 |
| December | 253.1 | 219.3 | 236.6 | 231.8 | 127.7 |
| January | 254.3 | 218.5 | 235.9 | 230.2 | 127.7 |
| February | 253.8 | 218.2 | 235.5 | 230.3 | 127.7 |
| March | 254.3 | 218.4 | 235.7 | 230.6 | 127.7 |
| April | 256.0 | 218.4 | 235.7 | 230.6 | 127.7 |
| May | 257.2 | 218.4 | 235.7 | 230.6 | 127.7 |
| June | 257.7 | 218.3 | 235.7 | 230.6 | 127.7 |
| July | 259.8 | 217.9 | 235.1 | 230.0 | 127.7 |
| August | 260.0 | 218.1 | 235.4 | 230.3 | 127.7 |
| September | 259.8 | 218.2 | 235.4 | 230.2 | 127.7 |
| October | 261.7 | 219.5 | 235.9 | 230.8 | 127.7 |
| November | 262.7 | 219.5 | 236.0 | 230.8 | 127.7 |
| December | 263.2 | 226.4 | 247.4 | 233.0 | 127.7 |
| January | 265.8 | 226.2 | 246.6 | 234.3 | 127.5 |
| February | 267.2 | 226.2 | 246.6 | 234.4 | 127.5 |
| March | 268.2 | 226.3 | 246.7 | 234.4 | 127.5 |
| April | 270.3 | 229.5 | 252.2 | 234.8 | 127.5 |
| May | 273.2 | 229.5 | 252.2 | 234.8 | 127.5 |
| June | 273.4 | 229.5 | 252.3 | 234.8 | 127.5 |
| July | 273.0 | 229.6 | 252.5 | 234.9 | 127.5 |
| August | 271.3 | 229.5 | 252.2 | 234.7 | 127.5 |
| September | 271.8 | 229.4 | 252.2 | 234.6 | 127.5 |
| October | 274.9 | 229.4 | 252.2 | 234.5 | 127.5 |
| November | 274.9 | 229.4 | 252.2 | 234.5 | 127.5 |
| December | 276.1 | 229.4 | 252.2 | 234.5 | 127.5 |
| January | 281.3 | 229.3 | 252.7 | 234.0 | 126.1 |
| February | 280.9 | 229.7 | 253.1 | 234.3 | 126.1 |
| March | 280.4 | 229.6 | 253.1 | 234.3 | 126.1 |
| April | 280.4 | 229.4 | 252.7 | 234.3 | 126.1 |
| May | 281.6 | 229.4 | 252.8 | 234.3 | 126.1 |
| June | 281.8 | 229.4 | 252.8 | 234.3 | 126.1 |
| July | 282.8 | 229.5 | 252.8 | 234.5 | 126.1 |
| August | 285.4 | 229.5 | 252.8 | 234.5 | 126.1 |
| September | 288.0 | 229.5 | 252.8 | 234.5 | 126.1 |
| October | 292.6 | 229.8 | 253.3 | 234.6 | 126.1 |
| November | 294.0 | 231.4 | 256.0 | 234.6 | 126.1 |
| December | 291.9 | 231.4 | 256.0 | 234.6 | 126.1 |
|  |  |  |  |  |  |


| Appendix 1: BLS Price Indices <br> Table A1-2 <br> Discontinued Producer Price Indexes ( $1972=100)$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Finished Goods | Local Services | Local Residential Services | Local Business Services | Local Optional Additional Usage |
| 1991 January | 292.6 | 232.6 | 258.9 | 232.6 | 126.1 |
| February | 290.4 | 232.6 | 258.8 | 232.6 | 126.1 |
| March | 289.2 | 232.6 | 258.9 | 232.7 | 126.1 |
| April | 289.7 | 232.8 | 259.1 | 232.7 | 126.1 |
| May | 291.4 | 232.8 | 259.1 | 232.7 | 126.1 |
| June | 291.6 | 232.8 | 259.1 | 232.7 | 126.1 |
| July | 290.9 | 232.8 | 259.1 | 232.7 | 126.1 |
| August | 291.1 | 233.7 | 260.3 | 234.0 | 126.1 |
| September | 290.4 | 233.7 | 260.3 | 234.0 | 126.1 |
| October | 292.3 | 233.7 | 260.3 | 234.0 | 126.1 |
| November | 292.6 | 234.5 | 261.2 | 234.7 | 126.1 |
| December | 291.6 | 234.5 | 261.3 | 234.7 | 126.1 |
| 1992 January | 291.4 | 234.3 | 261.0 | 234.7 | 126.1 |
| February | 292.1 | 234.3 | 261.0 | 234.7 | 126.1 |
| March | 292.3 | 234.3 | 261.0 | 234.7 | 126.1 |
| April | 292.8 | 234.3 | 261.0 | 234.7 | 126.1 |
| May | 294.7 | 234.3 | 261.0 | 234.7 | 126.1 |
| June | 296.4 | 234.3 | 261.0 | 234.7 | 126.1 |
| July | 295.9 | 234.1 | 260.7 | 234.6 | 126.1 |
| August | 295.7 | 234.1 | 260.7 | 234.6 | 126.1 |
| September | 295.0 | 234.1 | 260.7 | 234.6 | 126.1 |
| October | 297.6 | 234.1 | 260.7 | 234.6 | 126.1 |
| November | 296.7 | 234.1 | 260.7 | 234.6 | 126.1 |
| December | 296.2 | 234.1 | 260.7 | 234.3 | 126.1 |
| 1993 January | 297.1 | 234.9 | 262.2 | 234.5 | 126.1 |
| February | 297.8 | 234.9 | 262.2 | 234.5 | 126.1 |
| March | 298.3 | 234.9 | 262.2 | 234.5 | 126.1 |
| April | 300.2 | 234.9 | 262.2 | 234.5 | 126.1 |
| May | 301.0 | 234.9 | 262.2 | 234.5 | 126.1 |
| June | 300.2 | 234.9 | 262.2 | 234.5 | 126.1 |
| July | 299.8 | 236.1 | 262.2 | 239.8 | 126.1 |
| August | 297.1 | 236.1 | 262.2 | 239.8 | 126.1 |
| September | 296.2 | 236.2 | 262.2 | 240.1 | 126.1 |
| October | 298.1 | 236.6 | 263.0 | 240.0 | 126.1 |
| November | 297.8 | 236.6 | 263.0 | 240.0 | 126.1 |
| December | 296.9 | 236.4 | 262.8 | 239.7 | 126.1 |
| 1994 January | 297.8 | 236.9 | 263.3 | 240.6 | 126.1 |
| February | 298.6 | 236.9 | 263.3 | 240.6 | 126.1 |

## Appendix 1: BLS Price Indices

Table A1-2
Discontinued Producer Price Indexes (1972 = 100)

|  | Finished <br> Goods | Local <br> Services | Local <br> Residential <br> Services | Local <br> Business <br> Services | Local Optional <br> Additional <br> Usage |
| :--- | ---: | ---: | ---: | ---: | ---: |
| March | 298.8 | 236.9 | 263.3 | 240.6 | 126.1 |
| April | 299.0 | 238.1 | 265.2 | 240.7 | 126.1 |
| May | 299.8 | 238.0 | 265.0 | 240.5 | 126.1 |
| June | 300.5 | 238.0 | 265.0 | 240.5 | 126.1 |
| July | 301.4 | 237.7 | 264.7 | 240.0 | 126.1 |
| August | 302.6 | 237.7 | 264.7 | 240.0 | 126.1 |
| September | 300.5 | 237.6 | 264.7 | 239.3 | 126.1 |
| October | 301.0 | 237.6 | 264.7 | 239.3 | 126.1 |
| November | 301.7 | 237.6 | 264.7 | 239.3 | 126.1 |
| December | 301.9 | 237.6 | 264.7 | 239.3 | 126.1 |
| 1995 January | 302.9 | 243.9 | 272.8 | 247.4 | 126.1 |
| February | 303.6 | 243.9 | 272.8 | 247.4 | 126.1 |
| March | 304.1 | 244.1 | 273.2 | 247.6 | 126.1 |
| April | 305.3 | 244.1 | 273.2 | 247.6 | 126.1 |
| May | 306.5 | 244.2 | 273.1 | 248.1 | 126.1 |
| June | 306.7 | 244.2 | 273.1 | 248.1 | 126.1 |
| July | 306.7 | 244.2 | 273.1 | 248.1 | 126.1 |
| August | 306.5 |  |  |  |  |
| September | 306.0 |  |  |  |  |
| October | 307.9 |  |  |  |  |
| November | 307.9 |  |  |  |  |
| December | 308.9 |  |  |  |  |
| 1996 January | 309.6 |  |  |  |  |
| February | 309.6 |  |  |  |  |
| March | 311.2 |  |  |  |  |
| April | 312.4 |  |  |  |  |
| May | 313.4 | 314.8 | 314.6 |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes $\quad(1972=100)$

|  | Local Coin <br> Service | Toll <br> Service | Intrastate <br> MTS | Interstate <br> MTS | International <br> MTS |
| :---: | ---: | ---: | ---: | ---: | ---: |
| 1972 January | 99.8 | 98.7 | 96.6 | 100.0 | 100.1 |
| February | 100.0 | 99.3 | 98.1 | 100.0 | 100.1 |
| March | 100.0 | 99.3 | 98.1 | 100.0 | 100.1 |
| April | 100.0 | 99.3 | 98.1 | 100.0 | 100.1 |
| May | 100.0 | 99.8 | 99.6 | 100.0 | 100.1 |
| June | 100.0 | 100.2 | 100.4 | 100.0 | 100.1 |
| July | 100.0 | 100.2 | 100.4 | 100.0 | 100.1 |
| August | 99.9 | 100.5 | 101.3 | 100.0 | 100.1 |
| September | 100.1 | 100.7 | 101.8 | 100.0 | 100.1 |
| October | 100.1 | 100.7 | 101.8 | 100.0 | 100.1 |
| November | 100.1 | 100.7 | 101.8 | 100.0 | 100.1 |
| December | 100.1 | 100.7 | 101.8 | 100.0 | 99.4 |
| 1973 January | 100.1 | 100.7 | 101.9 | 100.0 | 99.4 |
| February | 100.1 | 102.4 | 102.1 | 103.2 | 99.4 |
| March | 100.1 | 102.5 | 102.1 | 103.2 | 99.4 |
| April | 100.1 | 102.5 | 102.1 | 103.2 | 99.4 |
| May | 100.1 | 102.5 | 102.1 | 103.2 | 99.4 |
| June | 100.1 | 102.5 | 102.1 | 103.2 | 99.4 |
| July | 100.1 | 102.5 | 102.1 | 103.1 | 99.4 |
| August | 101.5 | 103.4 | 104.2 | 103.1 | 99.4 |
| September | 101.5 | 103.4 | 104.2 | 103.1 | 99.4 |
| October | 103.4 | 103.8 | 105.4 | 103.1 | 99.4 |
| November | 103.7 | 103.8 | 105.4 | 103.1 | 99.4 |
| December | 103.8 | 104.3 | 106.3 | 103.1 | 99.4 |
| 1974 January | 103.8 | 104.6 | 107.2 | 103.1 | 99.4 |
| February | 103.8 | 104.6 | 107.2 | 103.1 | 99.4 |
| March | 103.8 | 104.6 | 107.2 | 103.1 | 99.4 |
| April | 103.8 | 104.6 | 107.2 | 103.1 | 99.4 |
| May | 103.8 | 104.6 | 107.2 | 103.1 | 99.4 |
| June | 103.8 | 104.5 | 107.2 | 102.9 | 99.4 |
| July | 103.8 | 104.4 | 107.2 | 102.9 | 99.4 |
| August | 103.9 | 104.4 | 107.2 | 102.9 | 99.4 |
| September | 103.9 | 104.4 | 107.2 | 102.9 | 99.4 |
| October | 103.9 | 105.1 | 109.1 | 102.9 | 99.4 |
| November | 103.9 | 105.1 | 109.1 | 102.9 | 99.4 |
| December | 103.9 | 105.1 | 109.1 | 102.9 | 99.4 |
| 1975 January | 103.9 | 105.4 | 109.8 | 102.9 | 99.4 |
| February | 103.9 | 105.4 | 109.8 | 102.9 | 99.4 |
|  |  |  |  |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes $\quad(1972=100)$

|  | Local Coin <br> Service | Toll <br> Service | Intrastate <br> MTS | Interstate <br> MTS | International <br> MTS |
| :--- | ---: | ---: | ---: | ---: | ---: |
| March | 103.9 | 111.6 | 111.6 | 113.5 | 99.4 |
| April | 103.9 | 111.6 | 111.6 | 113.5 | 99.4 |
| May | 103.9 | 111.6 | 111.6 | 113.5 | 98.3 |
| June | 103.9 | 111.6 | 111.6 | 113.5 | 98.3 |
| July | 103.9 | 112.3 | 113.5 | 113.5 | 98.3 |
| August | 103.9 | 113.1 | 115.4 | 113.5 | 98.3 |
| September | 104.6 | 113.1 | 115.4 | 113.5 | 98.3 |
| October | 104.9 | 113.5 | 116.4 | 113.5 | 98.3 |
| November | 105.2 | 114.7 | 119.3 | 113.5 | 98.3 |
| December | 105.2 | 114.8 | 119.3 | 113.5 | 98.3 |
| 1976 January | 105.7 | 115.4 | 121.0 | 113.5 | 98.3 |
| February | 114.6 | 115.6 | 121.4 | 113.5 | 98.3 |
| March | 114.6 | 119.6 | 122.6 | 120.2 | 99.0 |
| April | 114.6 | 119.6 | 122.6 | 120.0 | 100.5 |
| May | 114.6 | 120.4 | 124.7 | 120.0 | 100.5 |
| June | 114.6 | 120.8 | 125.7 | 120.0 | 100.5 |
| July | 114.6 | 120.8 | 125.7 | 120.0 | 100.5 |
| August | 114.7 | 122.0 | 128.6 | 120.0 | 100.5 |
| September | 114.7 | 122.0 | 128.6 | 120.0 | 100.5 |
| October | 114.7 | 122.0 | 128.6 | 120.0 | 100.5 |
| November | 114.7 | 122.0 | 128.6 | 120.0 | 100.5 |
| December | 114.7 | 122.0 | 128.6 | 120.0 | 100.5 |
| 1977 January | 114.7 | 123.3 | 132.2 | 120.0 | 100.5 |
| February | 114.7 | 123.1 | 131.5 | 120.0 | 100.5 |
| March | 114.7 | 123.1 | 131.5 | 120.0 | 100.5 |
| April | 114.7 | 123.2 | 131.8 | 120.0 | 100.5 |
| May | 114.7 | 123.2 | 131.8 | 120.0 | 100.5 |
| June | 114.7 | 123.3 | 132.0 | 120.0 | 100.5 |
| July | 114.7 | 123.1 | 132.0 | 119.7 | 98.7 |
| August | 114.7 | 123.1 | 132.0 | 119.7 | 98.7 |
| September | 114.7 | 124.2 | 132.0 | 121.9 | 98.7 |
| October | 114.7 | 124.3 | 132.0 | 121.9 | 98.7 |
| November | 114.8 | 124.3 | 132.0 | 121.9 | 98.7 |
| December | 114.9 | 124.3 | 132.0 | 121.9 | 98.7 |
| 1978 January | 115.0 | 124.3 | 132.1 | 121.9 | 97.1 |
| February | 115.0 | 124.2 | 132.0 | 121.9 | 97.1 |
| March | 115.4 | 124.3 | 132.0 | 121.9 | 97.1 |
| April | 115.4 | 124.3 | 132.0 | 121.9 | 97.1 |
|  |  |  |  |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes $\quad(1972=100)$

|  | Local Coin <br> Service | Toll <br> Service | Intrastate <br> MTS | Interstate <br> MTS | International <br> MTS |
| :--- | ---: | ---: | ---: | ---: | ---: |
| May | 115.4 | 124.3 | 132.0 | 121.9 | 97.1 |
| June | 115.4 | 124.3 | 132.0 | 121.9 | 97.1 |
| July | 115.4 | 124.3 | 132.0 | 121.9 | 97.1 |
| August | 115.5 | 124.3 | 132.0 | 121.9 | 97.1 |
| September | 115.6 | 124.3 | 132.0 | 121.9 | 97.1 |
| October | 115.6 | 124.3 | 132.0 | 121.9 | 97.1 |
| November | 115.6 | 123.8 | 132.0 | 121.9 | 84.0 |
| December | 124.7 | 123.9 | 132.1 | 121.9 | 84.0 |
| 1979 January | 124.7 | 123.3 | 132.1 | 120.9 | 84.0 |
| February | 124.5 | 123.2 | 131.9 | 120.8 | 84.0 |
| March | 124.2 | 123.2 | 131.9 | 120.8 | 84.0 |
| April | 124.2 | 123.3 | 131.9 | 120.8 | 84.0 |
| May | 124.2 | 123.2 | 131.9 | 120.8 | 83.3 |
| June | 124.2 | 123.1 | 131.5 | 120.8 | 83.3 |
| July | 124.2 | 123.1 | 131.5 | 120.8 | 83.3 |
| August | 124.2 | 123.1 | 131.5 | 120.8 | 82.7 |
| September | 124.2 | 123.1 | 131.5 | 120.8 | 82.7 |
| October | 124.3 | 123.4 | 131.5 | 120.8 | 91.4 |
| November | 124.3 | 123.3 | 131.2 | 120.8 | 91.4 |
| December | 124.5 | 123.3 | 131.2 | 120.8 | 91.4 |
| 1980 January | 124.5 | 123.4 | 131.5 | 120.8 | 90.9 |
| February | 124.5 | 123.2 | 131.1 | 120.8 | 90.9 |
| March | 124.5 | 123.2 | 131.1 | 120.8 | 90.9 |
| April | 124.5 | 123.4 | 131.3 | 120.8 | 90.9 |
| May | 124.5 | 123.6 | 132.1 | 120.8 | 90.9 |
| June | 124.5 | 127.5 | 132.2 | 127.4 | 96.6 |
| July | 124.5 | 127.5 | 132.2 | 127.4 | 96.2 |
| August | 124.5 | 127.5 | 132.2 | 127.4 | 96.2 |
| September | 124.8 | 127.5 | 132.2 | 127.4 | 96.2 |
| October | 124.8 | 127.9 | 133.2 | 127.4 | 96.2 |
| November | 124.8 | 128.3 | 134.1 | 127.4 | 96.2 |
| December | 125.1 | 128.3 | 134.2 | 127.4 | 96.2 |
| 1981 January | 125.1 | 129.1 | 136.0 | 127.4 | 96.2 |
| February | 125.3 | 129.0 | 136.0 | 127.4 | 95.2 |
| March | 125.9 | 129.0 | 136.0 | 127.4 | 95.2 |
| April | 126.0 | 129.0 | 136.0 | 127.4 | 95.2 |
| May | 129.1 | 128.7 | 135.1 | 127.4 | 95.2 |
| June | 129.1 | 128.7 | 135.1 | 127.4 | 95.2 |
|  |  |  |  |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes $\quad(1972=100)$

|  | Local Coin <br> Service | Toll <br> Service | Intrastate <br> MTS | Interstate <br> MTS | International <br> MTS |
| :--- | ---: | ---: | ---: | ---: | ---: |
| July | 129.1 | 139.2 | 135.1 | 147.7 | 83.5 |
| August | 129.3 | 139.2 | 139.5 | 147.7 | 83.5 |
| September | 129.5 | 141.0 | 140.4 | 147.7 | 83.5 |
| October | 130.0 | 141.3 | 140.4 | 147.7 | 83.5 |
| November | 130.0 | 141.3 | 142.4 | 147.7 | 83.5 |
| December | 130.0 | 142.1 | 144.9 | 147.7 | 83.5 |
| 1982 January | 130.0 | 143.1 | 144.9 | 147.7 | 83.5 |
| February | 130.0 | 143.1 | 144.9 | 147.7 | 83.5 |
| March | 130.0 | 143.1 | 144.9 | 147.7 | 83.5 |
| April | 132.8 | 146.4 | 145.2 | 153.4 | 83.5 |
| May | 143.2 | 146.4 | 145.3 | 153.4 | 83.5 |
| June | 143.6 | 146.7 | 145.5 | 153.4 | 91.4 |
| July | 143.6 | 146.7 | 145.5 | 153.4 | 91.4 |
| August | 143.1 | 146.8 | 145.5 | 153.4 | 92.3 |
| September | 144.0 | 146.8 | 145.6 | 153.4 | 92.3 |
| October | 144.0 | 147.1 | 146.4 | 153.4 | 92.3 |
| November | 144.0 | 147.1 | 146.4 | 153.4 | 92.3 |
| December | 144.0 | 147.5 | 147.4 | 153.4 | 92.3 |
| 1983 January | 161.0 | 148.8 | 151.1 | 153.4 | 92.3 |
| February | 161.0 | 148.8 | 151.1 | 153.4 | 92.3 |
| March | 161.0 | 149.0 | 151.7 | 153.4 | 92.3 |
| April | 160.9 | 148.9 | 151.5 | 153.4 | 92.3 |
| May | 161.8 | 149.0 | 151.5 | 153.4 | 92.3 |
| June | 162.9 | 149.3 | 152.2 | 153.4 | 92.3 |
| July | 163.2 | 149.4 | 152.2 | 153.4 | 92.3 |
| August | 163.2 | 149.4 | 152.3 | 153.4 | 92.3 |
| September | 163.4 | 149.4 | 152.3 | 153.4 | 92.3 |
| October | 164.3 | 149.8 | 153.2 | 153.4 | 92.7 |
| November | 164.5 | 149.8 | 153.2 | 153.4 | 92.7 |
| December | 164.5 | 149.8 | 153.2 | 153.4 | 92.7 |
| 1984 January | 184.2 | 150.7 | 155.9 | 153.4 | 92.7 |
| February | 184.2 | 150.6 | 155.9 | 153.4 | 92.5 |
| March | 184.4 | 150.7 | 155.9 | 153.4 | 92.5 |
| April | 184.6 | 150.8 | 156.1 | 153.4 | 92.5 |
| May | 184.6 | 150.5 | 155.3 | 153.4 | 92.5 |
| June | 189.0 | 146.2 | 155.9 | 145.6 | 87.3 |
| July | 222.3 | 146.6 | 157.0 | 145.6 | 86.8 |
| August | 227.2 | 147.1 | 158.3 | 145.6 | 86.8 |
|  |  |  |  |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes $\quad(1972=100)$

|  | Local Coin <br> Service | Toll <br> Service | Intrastate <br> MTS | Interstate <br> MTS | International <br> MTS |
| :--- | ---: | ---: | ---: | ---: | ---: |
| September | 227.2 | 147.3 | 158.9 | 145.6 | 86.8 |
| October | 227.2 | 147.3 | 158.9 | 145.6 | 86.8 |
| November | 227.5 | 146.8 | 157.5 | 145.6 | 86.8 |
| December | 227.5 | 147.4 | 159.0 | 145.6 | 86.8 |
| 1985 January | 228.2 | 147.6 | 159.8 | 145.6 | 86.8 |
| February | 228.9 | 147.7 | 159.8 | 145.6 | 86.8 |
| March | 228.9 | 147.7 | 159.8 | 145.6 | 86.8 |
| April | 228.9 | 148.1 | 161.0 | 146.6 | 86.8 |
| May | 230.5 | 149.9 | 162.6 | 147.9 | 86.8 |
| June | 230.7 | 146.3 | 162.8 | 141.3 | 86.5 |
| July | 230.7 | 146.3 | 162.8 | 141.3 | 86.5 |
| August | 230.8 | 146.6 | 163.4 | 141.3 | 86.5 |
| September | 231.2 | 146.5 | 163.2 | 141.3 | 86.5 |
| October | 231.3 | 146.5 | 163.2 | 141.3 | 86.5 |
| November | 233.8 | 146.7 | 163.7 | 141.3 | 86.5 |
| December | 233.8 | 146.2 | 162.4 | 141.3 | 86.5 |
| 1986 January | 234.3 | 146.2 | 162.4 | 141.3 | 84.2 |
| February | 234.3 | 146.2 | 162.5 | 141.3 | 84.2 |
| March | 234.3 | 146.2 | 162.6 | 141.3 | 84.2 |
| April | 234.3 | 144.1 | 156.9 | 141.3 | 84.3 |
| May | 234.3 | 144.1 | 156.9 | 141.3 | 84.3 |
| June | 234.6 | 135.9 | 156.1 | 127.2 | 84.1 |
| July | 234.6 | 135.9 | 156.1 | 127.1 | 84.1 |
| August | 234.7 | 135.8 | 156.1 | 127.1 | 84.1 |
| September | 234.9 | 135.8 | 156.2 | 127.1 | 84.1 |
| October | 234.9 | 136.0 | 156.8 | 127.1 | 84.1 |
| November | 234.9 | 136.0 | 156.7 | 127.1 | 84.1 |
| December | 234.9 | 136.0 | 156.7 | 127.1 | 84.1 |
| 1987 January | 235.0 | 128.8 | 156.1 | 115.3 | 84.0 |
| February | 234.9 | 128.5 | 155.4 | 115.3 | 84.0 |
| March | 234.9 | 128.5 | 155.4 | 115.3 | 84.0 |
| April | 234.9 | 128.4 | 155.2 | 115.3 | 84.0 |
| May | 234.9 | 128.1 | 154.4 | 115.3 | 84.0 |
| June | 234.9 | 128.0 | 154.2 | 115.3 | 84.0 |
| July | 234.9 | 125.4 | 152.4 | 112.1 | 84.0 |
| August | 234.6 | 125.4 | 152.4 | 112.1 | 84.0 |
| September | 234.5 | 124.9 | 151.3 | 112.1 | 84.0 |
| October | 234.5 | 124.9 | 151.3 | 112.1 | 84.0 |
|  |  |  |  |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes $\quad(1972=100)$

|  | Local Coin <br> Service | Toll <br> Service | Intrastate <br> MTS | Interstate <br> MTS | International <br> MTS |
| :--- | ---: | ---: | ---: | ---: | ---: |
| November | 234.5 | 125.2 | 152.0 | 112.1 | 83.8 |
| December | 234.5 | 125.2 | 152.0 | 112.1 | 83.8 |
| 1988 January | 234.3 | 124.6 | 152.4 | 110.1 | 83.8 |
| February | 233.1 | 124.3 | 151.7 | 109.1 | 83.8 |
| March | 233.1 | 124.3 | 151.7 | 109.1 | 83.8 |
| April | 233.1 | 124.2 | 151.7 | 109.1 | 83.8 |
| May | 233.1 | 124.2 | 151.4 | 109.1 | 83.8 |
| June | 233.1 | 124.2 | 151.7 | 109.1 | 83.8 |
| July | 233.1 | 122.4 | 146.8 | 109.1 | 83.8 |
| August | 233.1 | 122.7 | 147.9 | 109.1 | 83.8 |
| September | 233.4 | 124.5 | 147.8 | 112.8 | 83.8 |
| October | 246.0 | 123.8 | 146.0 | 112.8 | 83.8 |
| November | 246.0 | 123.9 | 146.2 | 112.8 | 83.8 |
| December | 246.2 | 122.3 | 146.3 | 109.7 | 83.8 |
| 1989 January | 246.6 | 123.1 | 148.3 | 109.7 | 83.8 |
| February | 246.6 | 125.1 | 153.7 | 109.7 | 83.8 |
| March | 246.6 | 125.1 | 153.6 | 109.7 | 83.8 |
| April | 246.7 | 124.1 | 153.8 | 108.0 | 83.8 |
| May | 246.7 | 124.0 | 153.7 | 108.0 | 83.8 |
| June | 246.7 | 124.0 | 153.7 | 108.0 | 83.8 |
| July | 246.7 | 123.9 | 153.7 | 107.8 | 83.8 |
| August | 246.7 | 123.9 | 153.7 | 107.8 | 83.8 |
| September | 246.7 | 123.9 | 153.7 | 107.8 | 83.8 |
| October | 246.6 | 122.2 | 149.3 | 107.8 | 83.8 |
| November | 246.6 | 121.3 | 146.3 | 107.8 | 83.8 |
| December | 246.6 | 121.3 | 147.0 | 107.8 | 83.8 |
| 1990 January | 246.6 | 122.0 | 148.8 | 107.9 | 83.4 |
| February | 246.7 | 122.4 | 149.8 | 107.9 | 83.4 |
| March | 246.7 | 121.1 | 146.3 | 107.9 | 83.4 |
| April | 246.6 | 121.1 | 146.3 | 107.9 | 83.4 |
| May | 246.6 | 121.1 | 146.3 | 107.9 | 83.4 |
| June | 246.6 | 121.1 | 146.3 | 107.9 | 83.4 |
| July | 246.6 | 120.9 | 146.2 | 107.9 | 83.4 |
| August | 246.6 | 120.8 | 146.2 | 107.7 | 83.4 |
| September | 246.6 | 120.9 | 146.2 | 107.7 | 83.4 |
| October | 246.7 | 120.7 | 145.8 | 107.7 | 83.4 |
| November | 248.5 | 120.0 | 143.8 | 107.7 | 83.4 |
| December | 248.5 | 120.0 | 143.8 | 107.7 | 83.4 |
|  |  |  |  |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes $\quad(1972=100)$

|  | Local Coin <br> Service | Toll <br> Service | Intrastate <br> MTS | Interstate <br> MTS | International <br> MTS |
| :---: | ---: | ---: | ---: | ---: | ---: |
| 1991 January | 248.8 | 117.8 | 140.9 | 105.6 | 83.4 |
| February | 248.8 | 117.8 | 140.9 | 105.6 | 83.4 |
| March | 248.8 | 117.7 | 140.7 | 105.4 | 83.4 |
| April | 248.8 | 117.6 | 140.6 | 105.4 | 83.4 |
| May | 248.8 | 117.6 | 138.8 | 105.4 | 83.4 |
| June | 248.8 | 116.6 | 138.1 | 105.4 | 83.4 |
| July | 248.8 | 116.3 | 138.1 | 104.7 | 83.4 |
| August | 248.8 | 117.0 | 138.1 | 104.7 | 83.4 |
| September | 248.8 | 117.8 | 140.0 | 106.3 | 83.6 |
| October | 248.8 | 117.8 | 140.2 | 106.3 | 83.6 |
| November | 249.2 | 117.8 | 140.1 | 106.3 | 83.6 |
| December | 249.4 | 117.8 | 140.1 | 106.3 | 83.6 |
| 1992 January | 249.4 | 118.3 | 139.8 | 107.4 | 83.6 |
| February | 249.4 | 118.4 | 140.2 | 107.4 | 83.6 |
| March | 249.4 | 118.4 | 140.1 | 107.4 | 83.6 |
| April | 249.4 | 118.4 | 140.1 | 107.4 | 83.6 |
| May | 249.4 | 118.4 | 140.1 | 107.4 | 83.6 |
| June | 249.4 | 117.5 | 137.9 | 107.4 | 83.6 |
| July | 249.5 | 118.1 | 139.3 | 107.4 | 83.6 |
| August | 249.5 | 119.3 | 142.5 | 107.4 | 83.6 |
| September | 249.5 | 118.0 | 142.5 | 107.4 | 83.6 |
| October | 249.5 | 118.2 | 143.1 | 107.4 | 83.6 |
| November | 249.5 | 118.2 | 141.9 | 107.4 | 83.6 |
| December | 249.4 | 119.0 | 141.9 | 107.4 | 83.6 |
| 1993 January | 249.4 | 118.0 | 140.2 | 106.6 | 78.8 |
| February | 249.4 | 118.0 | 142.2 | 106.6 | 78.8 |
| March | 249.4 | 117.9 | 140.1 | 109.4 | 78.1 |
| April | 249.4 | 119.1 | 140.1 | 109.4 | 78.6 |
| May | 249.4 | 118.8 | 140.3 | 109.4 | 68.6 |
| June | 249.4 | 118.9 | 140.5 | 109.4 | 68.6 |
| July | 250.1 | 118.7 | 140.0 | 109.4 | 68.6 |
| August | 250.1 | 119.7 | 139.7 | 111.5 | 68.6 |
| September | 250.1 | 120.1 | 140.7 | 111.5 | 68.6 |
| October | 250.1 | 120.0 | 140.4 | 111.5 | 68.6 |
| November | 250.1 | 120.0 | 140.4 | 111.5 | 68.6 |
| December | 250.1 | 119.9 | 140.4 | 111.5 | 68.6 |
| January | 250.1 | 120.0 | 140.3 | 111.5 | 68.6 |
| February | 250.1 | 120.0 | 140.3 | 111.5 | 68.6 |
|  |  |  |  |  |  |


|  | Appendix 1: BLS Price Indices <br> Table A1-2 <br> Discontinued Producer Price Indexes $\quad(1972=100)$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Local Coin Service | Toll Service | Intrastate MTS | Interstate MTS | International MTS |
| March | 250.1 | 123.1 | 139.7 | 118.3 | 68.6 |
| April | 252.3 | 122.9 | 139.0 | 118.3 | 68.6 |
| May | 252.3 | 122.9 | 139.0 | 118.3 | 68.6 |
| June | 252.3 | 122.8 | 139.1 | 118.3 | 68.6 |
| July | 252.3 | 122.8 | 139.1 | 118.3 | 68.6 |
| August | 252.3 | 122.8 | 139.1 | 118.3 | 68.6 |
| September | 252.2 | 122.9 | 139.3 | 118.3 | 68.6 |
| October | 252.2 | 122.8 | 139.0 | 118.3 | 68.6 |
| November | 252.2 | 122.6 | 138.4 | 118.3 | 68.6 |
| December | 252.2 | 122.6 | 138.4 | 118.3 | 68.6 |
| 1995 January | 254.4 | 121.4 | 135.4 | 118.3 | 68.6 |
| February | 254.4 | 124.8 | 135.8 | 124.7 | 68.6 |
| March | 252.4 | 124.8 | 135.8 | 124.7 | 68.6 |
| April | 252.4 | 124.8 | 135.8 | 124.7 | 68.6 |
| May | 252.2 | 124.8 | 135.8 | 124.7 | 68.6 |
| June | 252.2 | 124.8 | 135.8 | 124.7 | 68.6 |
| July | 252.5 | 127.3 | 142.4 | 124.7 | 68.6 |
| August <br> September October | Discontinued |  |  |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes (1972 = 100)

|  | WATS | Interstate <br> WATS | Intrastate <br> WATS | Interstate Private <br> Line |
| :--- | ---: | ---: | ---: | ---: |
| 1972 January | 99.8 | 100.0 | 99.1 | 98.5 |
| February | 99.8 | 100.0 | 99.3 | 100.1 |
| March | 99.8 | 100.0 | 99.3 | 100.1 |
| April | 99.8 | 100.0 | 99.3 | 100.1 |
| May | 99.8 | 100.0 | 99.3 | 100.1 |
| June | 99.8 | 100.0 | 99.3 | 100.1 |
| July | 99.8 | 100.0 | 99.3 | 100.1 |
| August | 100.3 | 100.0 | 101.3 | 100.1 |
| September | 100.3 | 100.0 | 101.3 | 100.1 |
| October | 100.3 | 100.0 | 101.3 | 100.1 |
| November | 100.3 | 100.0 | 101.3 | 100.1 |
| December | 100.0 | 100.0 | 100.1 | 100.1 |
| 1973 January | 100.1 | 100.0 | 100.2 | 100.1 |
| February | 100.1 | 100.0 | 100.2 | 100.1 |
| March | 101.5 | 102.0 | 100.2 | 100.1 |
| April | 101.5 | 102.0 | 100.2 | 100.1 |
| May | 101.5 | 102.0 | 100.2 | 100.1 |
| June | 101.5 | 102.0 | 100.2 | 100.1 |
| July | 101.5 | 102.0 | 100.2 | 100.1 |
| August | 102.6 | 102.0 | 100.4 | 100.1 |
| September | 102.6 | 102.0 | 100.4 | 100.1 |
| October | 102.6 | 102.0 | 100.4 | 100.1 |
| November | 102.8 | 102.0 | 104.9 | 100.1 |
| December | 103.5 | 102.0 | 107.6 | 99.6 |
| 1974 January | 103.7 | 102.0 | 108.1 | 99.6 |
| February | 103.7 | 102.0 | 108.1 | 99.6 |
| March | 103.7 | 102.0 | 108.1 | 99.6 |
| April | 103.7 | 102.0 | 108.1 | 99.5 |
| May | 103.7 | 102.0 | 108.1 | 99.5 |
| June | 103.7 | 102.0 | 108.1 | 99.5 |
| July | 102.5 | 100.3 | 108.1 | 99.5 |
| August | 102.5 | 100.3 | 108.1 | 99.5 |
| September | 102.7 | 100.3 | 109.1 | 99.5 |
| October | 102.6 | 100.3 | 108.8 | 99.5 |
| November | 102.6 | 100.3 | 108.8 | 99.5 |
| December | 102.6 | 100.3 | 108.8 | 99.5 |
| 1975 January | 102.7 | 100.3 | 108.8 | 99.5 |
| February | 102.7 | 100.3 | 108.8 | 99.5 |
|  |  |  |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes (1972 = 100)

|  | WATS | Interstate <br> WATS | Intrastate <br> WATS | Interstate Private <br> Line |
| :--- | ---: | ---: | ---: | ---: |
| March | 104.5 | 102.9 | 108.8 | 99.5 |
| April | 105.2 | 102.9 | 111.2 | 102.2 |
| May | 105.2 | 102.9 | 111.2 | 103.6 |
| June | 105.2 | 102.9 | 111.2 | 103.8 |
| July | 105.2 | 102.9 | 111.2 | 103.8 |
| August | 105.5 | 102.9 | 112.4 | 103.8 |
| September | 106.4 | 102.9 | 115.7 | 103.8 |
| October | 106.4 | 102.9 | 115.7 | 107.0 |
| November | 106.8 | 102.9 | 117.0 | 107.0 |
| December | 106.8 | 102.9 | 121.6 | 107.0 |
| 1976 January | 108.0 | 102.9 | 121.6 | 107.0 |
| February | 108.0 | 102.9 | 121.6 | 107.0 |
| March | 109.6 | 105.1 | 121.6 | 108.7 |
| April | 109.6 | 105.1 | 121.6 | 109.0 |
| May | 109.6 | 105.1 | 121.6 | 109.0 |
| June | 109.6 | 105.1 | 121.6 | 108.3 |
| July | 109.6 | 105.1 | 121.6 | 108.3 |
| August | 110.8 | 105.1 | 126.0 | 108.3 |
| September | 110.8 | 105.1 | 126.0 | 108.3 |
| October | 110.8 | 105.1 | 126.0 | 108.3 |
| November | 110.8 | 105.1 | 126.0 | 108.3 |
| December | 110.8 | 105.1 | 126.0 | 108.3 |
| January | 111.1 | 105.1 | 126.7 | 108.3 |
| February | 111.3 | 105.1 | 127.5 | 108.3 |
| March | 111.3 | 105.1 | 127.5 | 108.3 |
| April | 111.4 | 105.1 | 127.9 | 108.3 |
| May | 111.4 | 105.1 | 127.9 | 108.3 |
| June | 111.4 | 105.1 | 127.9 | 108.4 |
| July | 111.4 | 105.1 | 127.9 | 108.4 |
| August | 111.6 | 105.1 | 128.8 | 108.4 |
| September | 111.6 | 105.1 | 128.8 | 108.4 |
| October | 112.3 | 105.1 | 131.4 | 108.4 |
| November | 112.3 | 105.1 | 131.4 | 108.7 |
| December | 112.4 | 105.1 | 131.7 | 108.6 |
| January | 112.4 | 105.1 | 131.7 | 108.6 |
| February | 112.4 | 105.1 | 131.5 | 108.6 |
| March | 113.0 | 105.1 | 133.8 | 108.6 |
| April | 112.7 | 105.1 | 132.7 | 108.6 |
|  |  |  |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes (1972 = 100

|  | WATS | Interstate <br> WATS | Intrastate <br> WATS | Interstate Private <br> Line |
| :--- | ---: | ---: | ---: | ---: |
| May | 112.7 | 105.1 | 132.7 | 108.6 |
| June | 112.7 | 105.1 | 132.7 | 108.6 |
| July | 113.2 | 105.1 | 134.4 | 108.6 |
| August | 113.2 | 105.1 | 134.7 | 108.6 |
| September | 113.2 | 105.1 | 134.7 | 108.6 |
| October | 113.2 | 105.1 | 134.7 | 108.6 |
| November | 113.2 | 105.1 | 134.7 | 108.6 |
| December | 113.2 | 105.1 | 134.7 | 108.6 |
| 1979 January | 113.2 | 105.1 | 134.7 | 108.6 |
| February | 113.2 | 105.1 | 134.7 | 108.6 |
| March | 113.2 | 105.1 | 134.7 | 108.6 |
| April | 113.6 | 105.1 | 136.0 | 108.7 |
| May | 113.6 | 105.1 | 136.0 | 108.7 |
| June | 113.6 | 105.1 | 136.0 | 108.7 |
| July | 113.6 | 105.1 | 136.0 | 108.7 |
| August | 114.3 | 105.1 | 138.5 | 108.7 |
| September | 114.3 | 105.1 | 138.5 | 108.3 |
| October | 114.3 | 105.1 | 138.5 | 108.3 |
| November | 114.3 | 105.1 | 138.5 | 108.3 |
| December | 114.4 | 105.1 | 139.0 | 108.3 |
| January | 114.4 | 105.1 | 139.0 | 108.3 |
| February | 114.4 | 105.1 | 138.8 | 108.3 |
| March | 114.4 | 105.1 | 138.8 | 108.3 |
| April | 114.6 | 105.1 | 139.7 | 108.3 |
| May | 114.6 | 105.1 | 139.7 | 108.3 |
| June | 118.4 | 110.5 | 139.3 | 110.7 |
| July | 118.4 | 110.5 | 139.3 | 110.7 |
| August | 118.4 | 110.5 | 139.3 | 110.7 |
| September | 118.4 | 110.5 | 139.3 | 110.8 |
| October | 118.8 | 110.5 | 140.7 | 110.8 |
| November | 118.8 | 110.5 | 140.7 | 110.8 |
| December | 118.8 | 110.5 | 140.7 | 110.8 |
| 1981 January | 120.2 | 110.5 | 145.9 | 110.8 |
| February | 120.2 | 110.5 | 145.8 | 110.8 |
| March | 120.2 | 110.5 | 145.8 | 110.8 |
| April | 120.2 | 110.5 | 145.8 | 110.8 |
| May | 120.5 | 110.5 | 146.9 | 117.2 |
| June | 120.5 | 110.5 | 146.9 | 117.2 |
|  |  |  |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes (1972 = 100

|  | WATS | Interstate <br> WATS | Intrastate <br> WATS | Interstate Private <br> Line |
| :--- | ---: | ---: | ---: | ---: |
| July | 128.9 | 122.1 | 146.9 | 153.3 |
| August | 128.9 | 122.1 | 146.9 | 153.3 |
| September | 129.8 | 122.1 | 150.1 | 154.5 |
| October | 129.8 | 122.1 | 150.1 | 154.5 |
| November | 129.8 | 122.1 | 150.1 | 154.5 |
| December | 129.9 | 122.1 | 150.5 | 154.5 |
| 1982 January | 129.9 | 122.1 | 150.5 | 154.5 |
| February | 129.9 | 122.1 | 150.5 | 154.5 |
| March | 129.9 | 122.1 | 150.5 | 154.5 |
| April | 133.5 | 127.1 | 150.5 | 156.9 |
| May | 133.4 | 127.1 | 149.9 | 156.9 |
| June | 133.4 | 127.1 | 149.9 | 156.9 |
| July | 133.4 | 127.1 | 149.9 | 156.9 |
| August | 133.5 | 127.1 | 154.4 | 156.9 |
| September | 133.5 | 127.1 | 154.4 | 156.9 |
| October | 133.1 | 127.1 | 148.9 | 156.9 |
| November | 133.1 | 127.1 | 148.9 | 156.9 |
| December | 133.1 | 127.1 | 148.9 | 156.9 |
| 1983 January | 131.8 | 127.1 | 144.1 | 156.9 |
| February | 131.8 | 127.1 | 144.3 | 156.9 |
| March | 131.8 | 127.1 | 144.3 | 156.9 |
| April | 131.8 | 127.1 | 144.3 | 156.9 |
| May | 132.4 | 127.1 | 146.3 | 156.9 |
| June | 132.7 | 127.1 | 147.6 | 156.9 |
| July | 133.7 | 127.1 | 151.2 | 156.9 |
| August | 133.7 | 127.1 | 151.2 | 156.9 |
| September | 133.7 | 127.1 | 151.2 | 156.9 |
| October | 133.7 | 127.1 | 151.2 | 156.9 |
| November | 133.7 | 127.1 | 151.2 | 156.9 |
| December | 133.7 | 127.1 | 151.1 | 158.4 |
| 1984 January | 132.2 | 127.1 | 145.6 | 158.4 |
| February | 132.2 | 127.1 | 145.9 | 158.4 |
| March | 132.7 | 127.1 | 147.3 | 158.4 |
| April | 132.6 | 127.1 | 147.1 | 158.4 |
| May | 132.8 | 127.1 | 147.8 | 158.4 |
| June | 127.2 | 119.6 | 147.4 | 158.4 |
| July | 127.6 | 119.6 | 148.8 | 158.4 |
| August | 127.5 | 119.6 | 148.5 | 158.4 |
|  |  |  |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes (1972 = 100

|  | WATS | Interstate <br> WATS | Intrastate <br> WATS | Interstate Private <br> Line |
| :--- | ---: | ---: | ---: | ---: |
| September | 127.5 | 119.6 | 148.5 | 158.4 |
| October | 127.6 | 119.6 | 148.7 | 158.4 |
| November | 127.6 | 119.6 | 148.7 | 163.1 |
| December | 127.8 | 119.6 | 149.6 | 163.1 |
| 1985 January | 127.6 | 119.6 | 148.8 | 163.1 |
| February | 127.6 | 119.6 | 148.8 | 163.1 |
| March | 127.8 | 119.6 | 149.7 | 159.2 |
| April | 127.8 | 119.6 | 149.5 | 159.2 |
| May | 128.2 | 119.6 | 150.9 | 159.2 |
| June | 123.5 | 113.1 | 151.0 | 168.3 |
| July | 123.5 | 113.1 | 151.0 | 168.3 |
| August | 123.5 | 113.1 | 151.0 | 168.3 |
| September | 123.7 | 113.1 | 151.6 | 168.3 |
| October | 123.6 | 113.1 | 151.3 | 168.3 |
| November | 123.5 | 113.1 | 150.9 | 168.3 |
| December | 123.3 | 113.1 | 150.3 | 168.3 |
| January | 124.2 | 113.1 | 153.6 |  |
| February | 124.2 | 113.1 | 153.6 |  |
| March | 124.2 | 113.1 | 153.6 | Discontinued |
| April | 124.4 | 113.1 | 154.2 |  |
| May | 124.9 | 113.9 | 154.1 |  |
| June | 115.4 | 100.8 | 154.3 |  |
| July | 115.3 | 100.6 | 154.3 |  |
| August | 114.2 | 100.6 | 150.2 |  |
| September | 113.8 | 100.6 | 148.9 |  |
| October | 113.8 | 100.6 | 148.7 |  |
| November | 113.7 | 100.6 | 148.6 |  |
| December | 113.3 | 100.6 | 146.9 |  |
| 1987 January | 111.1 | 97.5 | 146.9 |  |
| February | 110.9 | 97.5 | 146.4 |  |
| March | 110.9 | 97.5 | 146.4 |  |
| April | 110.9 | 97.5 | 146.4 |  |
| May | 110.9 | 97.5 | 146.4 | 144.2 |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes (1972 = 100)

|  | WATS | Interstate <br> WATS | Intrastate <br> WATS |
| :--- | ---: | ---: | ---: |
| November | 110.1 | 97.5 | 143.4 |
| December | 110.1 | 97.5 | 143.4 |
| 1988 January | 106.4 | 93.1 | 141.4 |
| February | 105.9 | 93.1 | 139.8 |
| March | 105.9 | 93.1 | 139.8 |
| April | 104.9 | 93.1 | 136.2 |
| May | 104.9 | 93.1 | 136.2 |
| June | 104.8 | 93.1 | 135.6 |
| July | 105.0 | 93.1 | 135.6 |
| August | 104.0 | 93.1 | 132.9 |
| September | 103.3 | 93.1 | 130.1 |
| October | 102.7 | 93.1 | 128.2 |
| November | 103.4 | 93.1 | 130.5 |
| December | 102.7 | 92.5 | 129.7 |
| 1989 January | 102.0 | 90.6 | 131.7 |
| February | 102.0 | 90.6 | 131.7 |
| March | 102.0 | 90.6 | 131.7 |
| April | 99.2 | 87.0 | 131.4 |
| May | 99.1 | 87.0 | 131.0 |
| June | 99.3 | 87.0 | 131.8 |
| July | 99.1 | 87.0 | 131.0 |
| August | 99.0 | 87.0 | 130.5 |
| September | 98.8 | 87.0 | 130.1 |
| October | 98.8 | 87.0 | 130.0 |
| November | 98.8 | 87.0 | 130.0 |
| December | 98.8 | 87.0 | 130.0 |
| January | 98.4 | 87.0 | 128.6 |
| February | 98.4 | 87.0 | 128.6 |
| March | 98.5 | 87.0 | 128.7 |
| April | 98.5 | 87.0 | 128.7 |
| May | 98.5 | 87.0 | 128.7 |
| June | 98.5 | 87.0 | 128.7 |
| July | 97.2 | 87.0 | 124.2 |
| August | 97.2 | 87.0 | 124.2 |
| September | 97.8 | 87.0 | 126.1 |
| October | 97.8 | 87.0 | 126.1 |
| November | 97.8 | 87.0 | 126.1 |
| December | 97.8 | 87.0 | 126.1 |
|  |  |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes (1972 = 100)

|  | WATS | Interstate <br> WATS | Intrastate <br> WATS |
| :--- | ---: | ---: | ---: |
| 1991 January | 97.5 | 87.0 | 125.3 |
| February | 97.5 | 87.0 | 125.3 |
| March | 97.5 | 87.0 | 125.3 |
| April | 97.5 | 87.0 | 125.3 |
| May | 97.5 | 87.0 | 125.3 |
| June | 97.5 | 87.0 | 125.3 |
| July | 97.5 | 87.0 | 125.3 |
| August | 97.5 | 87.0 | 125.3 |
| September | 97.5 | 87.0 | 125.3 |
| October | 97.5 | 87.0 | 125.3 |
| November | 97.5 | 87.0 | 125.3 |
| December | 97.4 | 87.0 | 124.8 |
| 1992 January | 97.1 | 87.0 | 123.9 |
| February | 97.1 | 87.0 | 123.9 |
| March | 97.1 | 87.0 | 123.9 |
| April | 97.1 | 87.0 | 123.9 |
| May | 97.1 | 87.0 | 123.9 |
| June | 97.1 | 87.0 | 123.7 |
| July | 97.1 | 87.0 | 123.7 |
| August | 97.1 | 87.0 | 123.7 |
| September | 97.1 | 87.0 | 123.7 |
| October | 97.0 | 87.0 | 123.4 |
| November | 97.0 | 87.0 | 123.4 |
| December | 97.0 | 87.0 | 123.4 |
| 1993 January | 97.0 | 87.0 | 123.3 |
| February | 97.0 | 87.0 | 123.3 |
| March | 97.0 | 87.0 | 123.3 |
| April | 96.5 | 87.0 | 121.5 |
| May | 96.5 | 87.0 | 121.5 |
| June | 96.5 | 87.0 | 121.5 |
| July | 96.5 | 87.0 | 121.5 |
| August | 96.5 | 87.0 | 121.5 |
| September | 96.5 | 87.0 | 121.5 |
| October | 96.5 | 87.0 | 121.5 |
| November | 96.5 | 87.0 | 121.5 |
| December | 96.2 | 87.0 | 120.3 |
| January | 96.2 | 87.0 | 120.3 |
| February | 96.2 | 87.0 | 120.3 |
|  |  |  |  |

Appendix 1: BLS Price Indices
Table A1-2
Discontinued Producer Price Indexes (1972 = 100)

|  | WATS | Interstate <br> WATS | Intrastate <br> WATS |
| :--- | ---: | ---: | ---: |
| March | 96.2 | 87.0 | 120.4 |
| April | 96.2 | 87.0 | 120.4 |
| May | 96.2 | 87.0 | 120.4 |
| June | 95.6 | 87.0 | 118.3 |
| July | 95.6 | 87.0 | 118.3 |
| August | 95.6 | 87.0 | 118.3 |
| September | 95.6 | 87.0 | 118.3 |
| October | 95.6 | 87.0 | 118.3 |
| November | 95.6 | 87.0 | 118.3 |
| December | 95.6 | 87.0 | 118.3 |
| 1995 January | 95.1 | 87.0 | 116.5 |
| February | 95.1 | 87.0 | 116.5 |
| March | 95.1 | 87.0 | 116.5 |
| April | 95.1 | 87.0 | 116.5 |
| May | 95.1 | 87.0 | 116.5 |
| June | 95.1 | 87.0 | 116.5 |
| July | 95.1 | 87.0 | 116.5 |
| August | Discontinued |  |  |
| September |  |  |  |
| October |  |  |  |

Appendix 1: BLS Price Indices

|  | Table A1-3: Revised <br> Telephone Communications, except Radiotelephone | Producer Price In | xes (June 19 | = 100) |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Local Service, except Private Lines | Residence Local Service | Business Local Service | Coin Local Service |
| BLS Series ID | pcu4813\# | pcu4813\#1 | pcu4813\#111 | pcu4813\#112 | pcu4813\#113 |
| 1995 June | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| July | 102.8 | 100.0 | 100.0 | 100.0 | 100.0 |
| August | 100.7 | 100.0 | 100.0 | 100.0 | 100.0 |
| September | 100.6 | 100.1 | 100.0 | 100.2 | 100.6 |
| October | 100.4 | 100.0 | 99.8 | 100.2 | 100.6 |
| November | 99.6 | 100.0 | 99.8 | 100.2 | 100.6 |
| December | 99.6 | 100.0 | 99.8 | 100.2 | 100.6 |
| 1996 January | 99.3 | 100.0 | 99.8 | 100.1 | 100.6 |
| February | 99.6 | 100.0 | 99.8 | 100.2 | 100.6 |
| March | 99.5 | 100.1 | 99.8 | 100.2 | 101.9 |
| April | 99.7 | 100.1 | 99.8 | 100.2 | 101.9 |
| May | 99.5 | 100.1 | 99.8 | 100.2 | 101.9 |
| June | 99.9 | 100.2 | 100.0 | 100.2 | 101.9 |
| July | 100.3 | 100.3 | 100.0 | 100.4 | 102.0 |
| August | 100.6 | 100.4 | 100.0 | 100.5 | 102.0 |
| September | 100.5 | 100.4 | 100.0 | 100.5 | 102.0 |
| (prelim) October | 100.0 | 100.4 | 100.1 | 100.5 | 102.0 |
| (prelim) November | 99.4 | 100.4 | 100.1 | 100.5 | 102.0 |
| (prelim) December | 99.6 | 100.4 | 100.1 | 100.5 | 102.0 |
| (p) 1997 January | 100.5 | 100.4 | 100.1 | 100.5 | 102.0 |

Producer Price Indices are subject to revision four months after release

|  | Appendix 1: BLS Price Indices <br> Table A1-3: Revised Producer Price Indexes (June $1995=100$ ) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Other Local Service | Directory Assistance | Other Local Service, except Directory Assistance | Public Switched Toll Service | Residence Switched Toll Service | Intrastate Residence Switched Toll Service |
| BLS Series ID | pcu4813\#114 | pcu4813\#11401 | pcu4813\#11409 | pcu4813\#2 | pcu4813\#21 | pcu4813\#211 |
| 1995 June | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| July | 100.0 | 100.0 | 100.0 | 105.2 | 102.6 | 101.2 |
| August | 100.0 | 100.0 | 100.0 | 101.3 | 101.3 | 101.1 |
| September | 100.0 | 100.0 | 100.0 | 101.0 | 101.0 | 103.2 |
| October | 100.0 | 100.0 | 100.0 | 100.8 | 102.0 | 105.8 |
| November | 100.0 | 100.0 | 100.0 | 99.3 | 99.7 | 102.9 |
| December | 100.0 | 100.0 | 100.0 | 99.1 | 100.1 | 104.2 |
| 1996 January | 100.0 | 100.0 | 100.0 | 98.8 | 99.6 | 101.6 |
| February | 100.0 | 100.0 | 100.0 | 99.3 | 100.3 | 104.7 |
| March | 100.0 | 100.0 | 100.0 | 99.0 | 101.3 | 106.3 |
| April | 100.0 | 100.0 | 100.0 | 99.3 | 100.6 | 104.2 |
| May | 100.0 | 100.0 | 100.0 | 98.8 | 100.8 | 106.0 |
| June | 100.0 | 100.0 | 100.0 | 99.5 | 101.2 | 106.0 |
| July | 100.0 | 100.0 | 100.0 | 100.2 | 102.8 | 106.4 |
| August | 100.0 | 100.0 | 100.0 | 100.9 | 103.3 | 110.4 |
| September | 100.0 | 100.0 | 100.0 | 100.6 | 102.1 | 107.8 |
| (prelim) October | 100.0 | 100.0 | 100.0 | 99.6 | 102.0 | 103.4 |
| (prelim) November | 100.0 | 100.0 | 100.0 | 98.6 | 101.0 | 106.4 |
| (prelim) December | 100.0 | 100.0 | 100.0 | 98.9 | 100.6 | 104.0 |
| (p) 1997 January | 100.0 | 100.0 | 100.0 | 100.6 | 102.9 | 100.0 |

Producer Price Indices are subject to revision four months after release

|  | Appendix 1: BLS Price Indices <br> Table A1-3: Revised Producer Price Indexes (June 1995 = 100) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Interstate Residence Switched Toll Service | International Residence Switched Toll Service | Business Switched Toll Service | Business Switched Access Toll Service | Outbound Business Switched Access Toll Service |
| BLS Series ID | pcu4813\#212 | pcu4813\#213 | pcu4813\#22 | pcu4813\#221 | pcu4813\#2211 |
| 1995 June | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| July | 105.2 | 99.4 | 108.2 | 104.0 | 103.8 |
| August | 103.7 | 95.7 | 101.4 | 101.4 | 101.3 |
| September | 100.1 | 97.2 | 101.0 | 102.1 | 103.1 |
| October | 100.9 | 96.4 | 99.5 | 100.3 | 99.4 |
| November | 98.1 | 94.3 | 98.8 | 99.2 | 99.4 |
| December | 96.3 | 97.1 | 98.0 | 98.4 | 99.2 |
| 1996 January | 99.3 | 95.0 | 97.8 | 98.7 | 99.1 |
| February | 98.2 | 95.0 | 98.0 | 99.0 | 98.3 |
| March | 98.8 | 92.9 | 96.3 | 96.5 | 96.2 |
| April | 98.6 | 93.3 | 97.8 | 98.4 | 98.0 |
| May | 97.9 | 93.8 | 96.5 | 96.7 | 97.8 |
| June | 98.2 | 94.2 | 97.5 | 97.2 | 97.5 |
| July | 102.3 | 92.8 | 97.1 | 97.4 | 97.2 |
| August | 99.2 | 90.5 | 98.0 | 99.4 | 99.7 |
| September | 98.1 | 89.3 | 98.9 | 100.3 | 101.7 |
| (prelim) October | 103.1 | 92.6 | 96.7 | 96.1 | 95.7 |
| (prelim) November | 100.1 | 81.5 | 95.8 | 95.6 | 95.5 |
| (prelim) December | 102.2 | 79.7 | 96.8 | 98.3 | 98.4 |
| (p) 1997 January | 111.7 | 81.2 | 97.9 | 99.0 | 99.7 |

Producer Price Indices are subject to revision four months after release

|  | Appendix 1: BLS Price Indices <br> Table A1-3: Revised Producer Price Indexes (June $1995=100$ ) |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Intrastate Business Switched Access Toll Service, Outbound | Interstate Business Switched Access Toll Service, Outbound | International Business Switched Access Toll Service, Outbound | Inbound Business Switched Access Toll Service |
| BLS Series ID | pcu4813\#22111 | pcu4813\#22112 | pcu4813\#22113 | pcu4813\#2212 |
| 1995 June | 100.0 | 100.0 | 100.0 | 100.0 |
| July | 100.6 | 102.7 | 116.4 | 104.4 |
| August | 100.7 | 102.7 | 99.2 | 101.6 |
| September | 101.0 | 103.3 | 109.4 | 100.3 |
| October | 100.8 | 98.9 | 97.0 | 101.9 |
| November | 100.8 | 98.5 | 97.9 | 98.9 |
| December | 100.3 | 98.5 | 98.9 | 97.1 |
| 1996 January | 100.9 | 95.9 | 102.7 | 98.0 |
| February | 101.5 | 96.5 | 94.0 | 100.1 |
| March | 100.7 | 93.7 | 88.7 | 97.0 |
| April | 101.2 | 94.8 | 96.3 | 99.0 |
| May | 101.6 | 95.1 | 93.9 | 94.7 |
| June | 101.1 | 96.5 | 87.6 | 96.5 |
| July | 101.6 | 95.3 | 88.8 | 97.7 |
| August | 102.0 | 101.6 | 88.5 | 98.9 |
| September | 102.2 | 108.2 | 84.0 | 97.7 |
| (prelim) October | 100.9 | 94.7 | 81.7 | 96.8 |
| (prelim) November | 101.5 | 94.2 | 79.8 | 95.6 |
| (prelim) December | 102.2 | 98.5 | 86.6 | 98.0 |
| (p) 1997 January | 102.7 | 100.3 | 89.2 | 97.7 |

Producer Price Indices are subject to revision four months after release

|  | Appendix 1: BLS Price Indices <br> Table A1-3: Revised Producer Price Indexes (June $1995=100$ ) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Intrastate Business Switched Access Toll Service, Inbound | Interstate Business Switched Access Toll Service, Inbound | International Business Switched Access Toll Service, Inbound | Business Special Access Switched Toll Service, except Private Lines | Outbound Business Special Access Switched Toll Service |
| BLS Series ID | pcu4813\#22121 | pcu4813\#22122 | pcu4813\#22123 | pcu4813\#222 | pcu4813\#2221 |
| 1995 June | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| July | 100.6 | 107.5 | 94.6 | 115.4 | 119.9 |
| August | 100.7 | 101.8 | 103.9 | 101.3 | 100.3 |
| September | 98.9 | 101.1 | 92.4 | 99.1 | 97.7 |
| October | 98.3 | 104.1 | 99.3 | 98.0 | 98.3 |
| November | 99.5 | 99.5 | 95.5 | 98.0 | 98.5 |
| December | 101.0 | 93.5 | 107.1 | 97.3 | 97.8 |
| 1996 January | 96.2 | 95.6 | 106.6 | 96.3 | 95.8 |
| February | 97.4 | 98.8 | 101.2 | 96.4 | 95.1 |
| March | 95.3 | 90.4 | 93.4 | 95.8 | 94.3 |
| April | 95.9 | 94.9 | 91.0 | 96.9 | 95.3 |
| May | 91.2 | 92.3 | 88.1 | 96.2 | 96.6 |
| June | 96.6 | 90.0 | 93.9 | 98.2 | 96.2 |
| July | 95.6 | 89.6 | 93.2 | 96.7 | 95.1 |
| August | 91.4 | 94.8 | 100.6 | 95.6 | 95.9 |
| September | 92.3 | 94.2 | 92.9 | 96.6 | 95.1 |
| (prelim) October | 92.9 | 88.7 | 98.4 | 97.8 | 94.4 |
| (prelim) November | 92.4 | 87.3 | 98.4 | 96.3 | 93.2 |
| (prelim) December | 92.7 | 92.8 | 96.5 | 94.4 | 93.6 |
| (p) 1997 January | 89.8 | 93.1 | 100.8 | 96.1 | 93.7 |

Producer Price Indices are subject to revision four months after release

Appendix 1: BLS Price Indices

|  | Appendix 1: BLS Price Indices <br> Table A1-3: Revised Producer Price Indexes (June $1995=100$ ) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Intrastate Business Special Access Switched Toll Service, Outbound | Interstate Business Special Access Switched Toll Service, Outbound | International Business Special Access Switched Toll Service, Outbound | Inbound Business Special Access Switched Toll Service | Intrastate Business Special Access Switched Toll Service, Inbound |
| BLS Series ID | pcu4813\#22211 | pcu4813\#22212 | pcu4813\#22213 | pcu4813\#2222 | pcu4813\#22221 |
| 1995 June | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| July | 119.0 | 98.9 | 152.8 | 107.3 | 101.6 |
| August | 105.6 | 98.9 | 100.4 | 103.3 | 107.4 |
| September | 98.9 | 95.3 | 99.7 | 101.7 | 104.9 |
| October | 107.4 | 92.9 | 105.7 | 97.5 | 93.8 |
| November | 105.8 | 94.9 | 105.1 | 97.0 | 93.3 |
| December | 100.0 | 95.3 | 103.8 | 96.4 | 94.2 |
| 1996 January | 105.2 | 92.6 | 97.8 | 97.1 | 93.5 |
| February | 103.6 | 91.7 | 96.6 | 98.9 | 96.7 |
| March | 101.2 | 89.4 | 98.7 | 98.5 | 92.5 |
| April | 102.1 | 92.4 | 97.1 | 99.9 | 108.5 |
| May | 93.8 | 92.2 | 100.6 | 95.5 | 98.3 |
| June | 102.2 | 86.6 | 103.2 | 101.6 | 102.2 |
| July | 112.2 | 82.9 | 101.7 | 99.4 | 101.2 |
| August | 110.6 | 89.6 | 101.2 | 95.0 | 101.7 |
| September | 100.7 | 91.6 | 98.7 | 99.3 | 100.1 |
| (prelim) October | 107.5 | 85.6 | 96.8 | 103.8 | 93.3 |
| (prelim) November | 109.7 | 85.6 | 96.8 | 101.8 | 93.3 |
| (prelim) December | 109.7 | 89.6 | 91.8 | 95.7 | 102.6 |
| (p) 1997 January | 88.5 | 92.6 | 95.3 | 100.5 | 102.4 |

Producer Price Indices are subject to revision four months after release

|  | Appendix 1: BLS Price Indices <br> Table A1-3: Revised Producer Price Indexes (June $1995=100$ ) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Interstate Business Special Access Switched Toll Service, Inbound | International Business <br> Special Access <br> Switched Toll Service, Inbound | Other Toll Service | Private Line Service | Intrastate Private Line Service | LEC Intrastate Private Line Service |
| BLS Series ID | pcu4813\#22222 | pcu4813\#22223 | pcu4813\#29 | pcu4813\#3 | pcu4813\#31 | pcu4813\#311 |
| 1995 June | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| July | 109.0 | 99.6 | 100.0 | 100.0 | 100.0 | 100.0 |
| August | 102.2 | 98.5 | 100.0 | 100.0 | 100.0 | 100.0 |
| September | 99.9 | 97.6 | 100.0 | 100.0 | 100.0 | 100.0 |
| October | 99.7 | 97.3 | 100.0 | 100.0 | 100.0 | 100.0 |
| November | 98.7 | 97.2 | 100.0 | 100.0 | 100.0 | 100.0 |
| December | 97.1 | 97.1 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1996 January | 97.7 | 97.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| February | 101.5 | 97.3 | 100.0 | 100.0 | 99.9 | 99.9 |
| March | 100.8 | 97.4 | 100.0 | 100.0 | 99.9 | 99.9 |
| April | 98.8 | 97.6 | 100.0 | 100.3 | 101.1 | 101.2 |
| May | 96.0 | 97.5 | 100.1 | 100.4 | 101.1 | 101.2 |
| June | 105.4 | 97.7 | 99.8 | 100.4 | 101.1 | 101.2 |
| July | 101.1 | 97.5 | 100.3 | 100.4 | 101.1 | 101.2 |
| August | 91.1 | 97.2 | 100.9 | 100.4 | 101.1 | 101.2 |
| September | 100.1 | 97.1 | 100.2 | 100.4 | 101.1 | 101.2 |
| (prelim) October | 111.4 | 97.4 | 100.2 | 100.4 | 101.2 | 101.3 |
| (prelim) November | 111.4 | 96.9 | 100.2 | 100.4 | 101.2 | 101.3 |
| (prelim) December | 97.5 | 96.9 | 100.2 | 100.4 | 101.2 | 101.3 |
| (p) 1997 January | 106.4 | 96.5 | 100.2 | 100.4 | 101.2 | 101.3 |

Producer Price Indices are subject to revision four months after release

|  | Appendix 1: BLS Price Indices |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Other Telephone Services | Directory Advertising | Other Telephone Services |  |
| BLS Series ID | pcu4813\#9 | pcu4813\#91 | pcu4813\#99 |  |
| 1995 June | 100.0 | 100.0 | 100.0 |  |
| July | 100.0 | 100.0 | 100.0 |  |
| August | 100.0 | 100.0 | 100.0 |  |
| September | 100.0 | 100.0 | 100.0 |  |
| October | 100.0 | 100.0 | 100.0 |  |
| November | 100.2 | 100.3 | 100.0 |  |
| December | 100.2 | 100.3 | 100.0 |  |
| 1996 January | 100.2 | 100.3 | 100.0 |  |
| February | 100.2 | 100.3 | 100.0 |  |
| March | 100.2 | 100.3 | 100.0 |  |
| April | 100.2 | 100.3 | 100.0 |  |
| May | 100.2 | 100.3 | 100.0 |  |
| June | 100.2 | 100.3 | 100.0 |  |
| July | 100.2 | 100.2 | 100.0 |  |
| August | 100.2 | 100.3 | 100.0 |  |
| September | 100.2 | 100.2 | 100.0 |  |
| (prelim) October | 100.3 | 100.4 | 100.0 |  |
| (prelim) November | 100.3 | 100.4 | 100.0 |  |
| (prelim) December | 100.3 | 100.4 | 100.0 |  |
| (p) 1997 January | 100.5 | 100.7 | 100.0 |  |

Appendix 2: Residential Telephone Rates by City; October 1995

|  |  |  | Private line <br> with unlimited <br> rotary calling, <br> SCcs, <br> surcharges, <br> and taxes <br> Generally <br> Suabsidized <br> available rate |  | Rotary service connection, surcharges, and taxes <br> Generally available rate | $\begin{gathered} \text { Subsidized } \\ \text { rate } \\ \hline \hline \end{gathered}$ | Additional charges for Touch-Tone Service |  | Least cost inside wiring maintenance plan |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AL | Huntsville | Bell South | \$23.01 | \$15.32 | \$42.68 | \$21.34 |  |  | \$1.50 |
| AK | Anchorage | Anchorage | \$14.47 | \$7.22 | \$25.50 |  |  |  | \$1.50 |
| AZ | Tuscon | U.S. West | \$19.17 | \$13.79 | \$51.74 | \$17.08 |  |  | \$1.25 |
| AR | West Memphis | Southwestern Bell | \$28.42 | \$8.35 | \$44.54 | \$22.27 |  |  | \$2.25 |
|  | Pine Bluff | Southwestern Bell | \$21.96 | \$9.10 | \$43.92 | \$21.96 |  |  | \$2.25 |
| CA | Anaheim | Pac. Telesis | \$15.49 | \$5.90 | \$35.19 | \$10.13 |  |  | \$0.50 |
|  | Bakersfield | Pac. Telesis | \$15.49 | \$5.90 | \$35.19 | \$10.13 |  |  | \$0.50 |
|  | Fresno | Pac. Telesis | \$15.49 | \$5.90 | \$35.19 | \$10.13 |  |  | \$0.50 |
|  | Long Beach | GTE | \$23.53 | \$11.76 | \$45.73 | \$22.87 |  |  | \$0.95 |
|  | Los Angeles | Pac. Telesis | \$16.97 | \$6.47 | \$35.19 | \$10.13 |  |  | \$0.50 |
|  | Oakland | Pac. Telesis | \$16.60 | \$6.33 | \$35.19 | \$10.13 |  |  | \$0.50 |
|  | Salinas | Pac. Telesis | \$16.38 | \$6.24 | \$35.19 | \$10.13 |  |  | \$0.50 |
|  | San Bernadino | GTE | \$23.21 | \$11.60 | \$45.73 | \$22.87 |  |  | \$0.95 |
|  | San Diego | Pac. Telesis | \$15.49 | \$5.90 | \$35.19 | \$10.13 |  |  | \$0.50 |
|  | San Francisco | Pac. Telesis | \$15.49 | \$5.90 | \$35.19 | \$10.13 |  |  | \$0.50 |
|  | San Jose | Pac. Telesis | \$16.23 | \$6.18 | \$35.19 | \$10.13 |  |  | \$0.50 |
| CO | Boulder | U.S. West | \$21.61 | \$13.57 | \$37.45 | \$18.73 |  |  | \$1.95 |
|  | Col. Springs | U.S. West | \$19.78 | \$12.24 | \$36.40 | \$18.20 |  |  | \$1.95 |
|  | Denver | U.S. West | \$21.21 | \$13.18 | \$37.56 | \$18.78 |  |  | \$1.95 |
| CT | Ansonia | SNET | \$18.70 | \$9.96 | \$47.70 | \$23.85 |  |  | \$1.35 |
|  | Norwalk | SNET | \$17.60 | \$8.87 | \$47.70 | \$23.85 |  |  | \$1.35 |
| DC | Washington | Bell Atlantic | \$19.50 | \$8.81 | \$30.76 | \$15.38 | \$0.70 |  | \$1.25 |
| FL | Miami | Bell South | \$16.96 | \$8.94 | \$40.00 | \$20.00 |  |  | \$2.50 |
|  | Tampa | GTE | \$17.61 |  | \$62.98 | \$31.49 |  |  | \$1.00 |
|  | W. Palm Beach | Bell South | \$15.65 | \$7.78 | \$40.00 | \$20.00 |  |  | \$2.50 |
| GA | Albany | Bell South | \$19.15 | \$11.51 | \$42.50 |  | \$1.30 |  | \$2.00 |
|  | Atlanta | Bell South | \$23.32 | \$15.60 | \$42.50 |  | \$1.30 |  | \$2.00 |
| HI | Honolulu | GTE | \$19.58 | \$11.95 | \$45.50 | \$22.75 | \$1.65 |  | \$1.50 |
| IL | Chicago | Ameritech | \$17.21 |  | \$60.56 | \$30.28 |  |  | \$2.50 |
|  | Decatur | Ameritech | \$20.19 |  | \$60.64 | \$30.32 |  |  | \$2.50 |
|  | Rock Island | Ameritech | \$20.76 |  | \$60.64 | \$30.32 |  |  | \$2.50 |
| IN | Indianapolis | Ameritech | \$19.77 |  | \$47.00 | \$23.50 |  |  | \$2.00 |
|  | Terre Haute | GTE | \$22.13 |  | \$60.06 | \$30.03 | \$0.80 |  | \$1.50 |
| IA | Fort Dodge | Contel | \$14.03 |  | \$9.82 | \$4.34 |  |  | \$1.25 |
| KY | Louisville | Bell South | \$22.65 |  | \$34.50 | \$17.25 | \$1.00 |  | \$2.00 |
| LA | Baton Rouge | Bell South | \$20.99 |  | \$44.63 | \$22.32 | \$0.09 |  | \$2.00 |
|  | New Orleans | Bell South | \$20.02 |  | \$44.29 | \$22.15 | \$0.09 |  | \$2.00 |
| ME | Portland | NYNEX | \$17.99 | \$10.35 | \$47.44 | \$10.60 |  |  | \$0.75 |
| MD | Baltimore | Bell Atlantic | \$24.88 |  | \$48.00 | \$24.00 |  |  | \$0.85 |
| MA | Boston | NYNEX | \$22.01 | \$11.73 | \$38.92 | \$19.47 | \$0.98 |  | \$0.95 |
|  | Hyannis | NYNEX | \$22.01 | \$11.73 | \$38.92 | \$19.47 | \$0.98 |  | \$0.95 |
|  | Springfield | NYNEX | \$22.01 | \$11.73 | \$38.92 | \$19.47 | \$0.98 |  | \$0.95 |
| MI | Detroit | Ameritech | \$16.71 | \$12.13 | \$44.52 | \$22.26 | \$2.43 |  | \$2.25 |
|  | Grand Rapids | Ameritech | \$15.40 | \$11.03 | \$44.52 | \$22.26 | \$2.43 |  | \$2.25 |
|  | Saginaw | Ameritech | \$16.19 | \$11.82 | \$44.52 | \$22.26 | \$2.43 |  | \$2.25 |
| MN | Detroit Lakes | U.S. West | \$18.57 | \$10.90 | \$16.25 | \$8.13 | \$1.20 | \$2.50 | \$1.95 |
|  | Minneapolis | U.S. West | \$20.39 | \$12.67 | \$16.25 | \$8.13 | \$1.20 | \$2.50 | \$1.95 |
| MI | Pascagoula | Bell South | \$24.93 |  | \$49.22 | \$24.61 | \$1.30 |  | \$2.00 |
| MO | Kansas City | Southwestern Bell | \$18.12 | \$9.64 | \$42.47 | \$21.24 |  |  | \$3.00 |
|  | Mexico | Southwestern Bell | \$16.91 | \$7.59 | \$41.70 | \$20.85 |  |  | \$3.00 |
|  | St. Louis | Southwestern Bell | \$18.18 | \$9.67 | \$43.06 | \$21.53 |  |  | \$3.00 |
| MT | Butte | U.S. West | \$18.22 | \$11.01 | \$25.00 | \$12.50 |  |  | \$1.95 |
| NE | Grand Island | U.S. West | \$21.81 |  | \$30.52 | \$15.26 |  |  | \$1.95 |
| NJ | Phillipsburg | Bell Atlantic | \$11.96 |  | \$44.52 | \$22.26 | \$0.99 |  | \$1.25 |
| NM | Alamogordo | U.S. West | \$20.77 | \$10.14 | \$31.96 | \$7.99 |  |  | \$1.95 |
| NY | Binghamton | NYNEX | \$26.22 | \$14.51 | \$62.71 | \$11.40 |  |  | \$0.52 |

Appendix 2: Residential Telephone Rates by City; October 1995


* The measured service rate plus 100 five minute, same zone, business day calls is shown because unlimited local service is not offered.

Appendix 3: Business Telephone Rates by City; October 1995


Appendix 3: Business Telephone Rates by City; October 1995

|  |  |  |  |  |  |  | Additional Single Line Business rates |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Single Business Line | Representative Touch-Tone Line, including SLCs, surcharges, and taxes <br> Key System Line | PBX Line | Connection for one touch-tone line, including taxes and surcharges | Additional Charges for Touch-Tone <br> Monthly Charge | Connection Charge |  |
|  |  |  |  |  |  |  |  |  |  | Least Cost Inside Wiring Maintenance Plan |
| MO | St. Louis | Southwestern Bell |  | \$45.15 | \$60.22 | \$60.22 | \$61.63 |  |  | \$3.25 |
| MT | Butte | U.S. West |  | \$43.82 | \$54.63 | \$54.63 | \$61.40 |  |  | \$2.75 |
| NE | Grand Island | U.S. West |  | \$47.80 | \$59.81 | \$68.17 | \$49.05 |  |  | \$2.00 |
| NJ | Phillipsburg | Bell Atlantic | * | \$27.60 | \$27.42 | \$27.42 | \$79.50 | \$1.99 |  | \$0.95 |
| NM | Alamogordo | U.S. West |  | \$56.15 | \$68.13 | \$68.13 | \$57.47 |  |  | \$2.75 |
| NY | Binghamton | NYNEX | ** | \$49.99 | \$52.92 | \$53.21 | \$120.92 | \$1.37 |  | \$5.71 |
|  | Buffalo | NYNEX | ** | \$50.87 | \$53.86 | \$54.16 | \$123.08 | \$1.40 |  | \$5.71 |
|  | Massena | NYNEX | ** | \$49.70 | \$52.61 | \$52.90 | \$120.20 | \$1.38 |  | \$5.71 |
|  | New York City | NYNEX | ** | \$51.23 | \$54.24 | \$54.54 | \$123.95 | \$1.40 |  | \$5.71 |
|  | Ogdensburg | NYNEX | ** | \$51.08 | \$54.08 | \$54.37 | \$123.58 | \$1.38 |  | \$5.71 |
|  | Rochester | Rochester | ** | \$48.44 | \$54.39 | \$54.39 | \$55.56 | \$3.87 |  | \$2.50 |
| NC | Raleigh | Bell South |  | \$41.53 | \$30.61 | \$72.75 | \$64.38 | \$1.50 |  | \$2.50 |
|  | Rockingham | Bell South |  | \$36.09 | \$54.59 | \$62.75 | \$64.38 | \$1.50 |  | \$2.50 |
| OH | Canton | Ameritech | ** | \$44.25 | \$50.29 | \$54.26 | \$62.85 |  |  | \$2.00 |
|  | Cincinnati | Cin. Bell |  | \$52.99 | \$70.26 | \$70.26 | \$55.78 | \$1.69 | \$6.00 | \$2.50 |
|  | Cleveland | Ameritech | ** | \$43.22 | \$49.26 | \$53.23 | \$62.85 |  |  | \$2.00 |
|  | Columbus | Ameritech | ** | \$43.22 | \$49.26 | \$53.23 | \$62.85 |  |  | \$2.00 |
|  | Toledo | Ameritech | ** | \$44.25 | \$50.29 | \$54.26 | \$62.85 |  |  | \$2.00 |
| OR | Corvallis | U.S. West |  | \$37.10 | \$45.33 | \$45.33 | \$31.00 |  |  | \$2.00 |
|  | Portland | U.S. West |  | \$42.84 | \$51.79 | \$51.79 | \$31.00 |  |  | \$2.00 |
| PA | Allentown | Bell Atlantic | ** | \$37.28 | \$37.03 | \$38.77 | \$79.50 | \$1.80 |  | \$0.95 |
|  | Ellwood City | Bell Atlantic | ** | \$36.54 | \$38.47 | \$40.22 | \$79.50 | \$1.90 |  | \$1.50 |
|  | Johnstown | GTE | ** | \$37.28 | \$40.37 | \$41.99 | \$60.44 | \$2.48 |  | \$1.50 |
|  | New Castle | Bell Atlantic | ** | \$38.84 | \$38.47 | \$40.22 | \$79.50 | \$1.90 |  | \$1.50 |
|  | Philadelphia | Bell Atlantic | ** | \$30.64 | \$30.28 | \$32.02 | \$79.50 | \$1.90 |  | \$1.50 |
|  | Pittsburgh | Bell Atlantic | ** | \$31.67 | \$31.31 | \$33.05 | \$79.50 | \$1.90 |  | \$1.50 |
|  | Scranton | Bell Atlantic | ** | \$36.00 | \$35.74 | \$37.49 | \$79.50 | \$1.80 |  | \$1.50 |
| RI | Providence | NYNEX | ** | \$43.59 | \$45.17 | \$45.17 | \$46.50 |  |  | \$1.95 |
| SC | Beaufort | United |  | \$38.04 | \$58.04 | \$66.61 | \$35.60 |  |  | \$1.25 |
| TN | Memphis | Bell South |  | \$54.84 | \$92.81 | \$92.81 | \$66.80 | \$3.15 |  | \$1.25 |
|  | Nashville | Bell South |  | \$52.30 | \$88.46 | \$88.46 | \$63.62 | \$3.00 |  | \$1.25 |
| TX | Brownsville | Southwestern Bell |  | \$31.13 | \$38.65 | \$47.76 | \$69.06 | \$1.30 | \$2.35 | \$2.75 |
|  | Corpus Christi | Southwestern Bell |  | \$31.74 | \$39.15 | \$48.36 | \$69.29 | \$1.30 | \$2.35 | \$2.75 |
|  | Dallas | Southwestern Bell |  | \$38.35 | \$47.17 | \$60.02 | \$70.91 | \$1.30 | \$2.35 | \$2.75 |
|  | Fort Worth | Southwestern Bell |  | \$34.39 | \$42.53 | \$53.00 | \$70.21 | \$1.30 | \$2.35 | \$2.75 |
|  | Houston | Southwestern Bell |  | \$41.22 | \$50.76 | \$65.41 | \$70.93 | \$1.30 | \$2.35 | \$2.75 |
|  | San Antonio | Southwestern Bell |  | \$34.03 | \$42.08 | \$52.45 | \$69.34 | \$1.30 | \$2.35 | \$2.75 |
| UT | Logan | U.S. West |  | \$32.13 | \$40.65 | \$58.35 | \$53.06 |  |  | \$2.75 |
| VA | Richmond | Bell Atlantic |  | \$75.13 | \$79.70 | \$119.35 | \$64.00 | \$1.91 |  | \$3.00 |
|  | Smithfield | Continental |  | \$29.97 | \$45.87 | \$60.76 | \$29.25 | \$2.00 |  | \$1.75 |
| WA | Everett | GTE |  | \$39.92 | \$59.48 | \$59.48 | \$57.19 |  |  | \$1.75 |
|  | Seattle | U.S. West |  | \$37.23 | \$55.38 | \$55.38 | \$55.25 |  |  | \$2.00 |
| WV | Huntington | Bell Atlantic |  | \$73.37 | \$77.67 | \$114.59 | \$96.90 | \$2.75 |  | \$3.00 |
| WI | Milwaukee | Ameritech | ** | \$37.50 | \$39.05 | \$39.05 | \$68.21 |  |  | \$1.75 |
|  | Racine | Ameritech | ** | \$39.14 | \$40.68 | \$40.68 | \$67.88 |  |  | \$1.50 |

[^10] is shown because unlimited local service is not offered.

## ApPENDIX 4

A limited survey was conducted to collect residential rate data for 1983 through 1985 and single-line business rate data for 1983 through 1988. Monthly service and connection charges were collected, but no attempt was made to collect historic city-by-city data on taxes or on surcharges and credits accounted as revenue. The Annual Report on Utility and Carrier Regulation published by the National Association of Regulatory Utility Commissioners has some tax rates by year for 1983 through 1987. Tax rates appear to have changed only slightly over this period, so the table has been completed using reasonable assumptions. The tax and surcharge assumptions have relatively little impact on average rate levels. Historical residential and single line business rate data by city are contained in Appendix 4. Unlike rates shown in Appendix 2, these rates exclude taxes.

Historical data are not available for multi-line business, drop line and connection block installation, or inside wiring maintenance charges. Residential rates were collected for rotary service; business rates were collected for touch-tone service.

Appendix 4 Local Rates: 1983-1995

|  |  | Private (Single Party) Residential Rotary Access Line <br> Rates include Subscriber Line Charges. Rates are for unlimited calling where offered, and are for measured service with 100 five minute calls elsewhere. Rates exclude taxes. |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Excluding Surcharges |  |  | Including Surcharges Accounted as Company Revenue |  |  |  |  |  |  |  |  |  |
|  |  | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| AL | Huntsville | \$14.40 | \$15.90 | \$18.75 | \$19.75 | \$19.68 | \$19.51 | \$20.76 | \$20.76 | \$20.76 | \$20.85 | \$20.85 | \$21.60 | \$20.15 |
| AK | Anchorage | 6.75 | 6.75 | 7.75 | 8.75 | 9.35 | 7.45 | 7.90 | 7.90 | 7.90 | 13.75 | 15.45 | 13.20 | 13.20 |
| AZ | Tuscon | 9.21 | 11.05 | 12.05 | 14.95 | 14.10 | 14.13 | 13.73 | 13.73 | 15.93 | 15.93 | 15.93 | 15.93 | 16.71 |
| AR | West Memphis | 13.30 | 15.80 | 17.88 | 18.81 | 19.41 | 19.41 | 20.31 | 22.52 | 22.52 | 22.52 | 22.52 | 23.52 | 23.52 |
|  | Pine Bluff | 11.95 | 12.60 | 14.98 | 15.91 | 16.51 | 16.51 | 17.41 | 17.41 | 17.41 | 17.41 | 17.41 | 18.41 | 18.41 |
| CA | Anaheim | 6.70 | 8.25 | 9.25 | 10.50 | 10.99 | 10.63 | 11.30 | 10.56 | 11.80 | 11.70 | 11.63 | 11.58 | 14.37 |
|  | Bakersfield | 6.70 | 8.25 | 9.25 | 10.50 | 10.99 | 10.63 | 11.30 | 10.56 | 11.80 | 11.70 | 11.63 | 11.58 | 14.37 |
|  | Fresno | 6.70 | 8.25 | 9.25 | 10.50 | 10.99 | 10.63 | 11.30 | 10.56 | 11.80 | 11.70 | 11.63 | 11.58 | 14.37 |
|  | Long Beach | 7.75 | 9.75 | 10.75 | 13.13 | 12.70 | 11.96 | 13.27 | 14.11 | 15.78 | 15.91 | 15.91 | 15.23 | 20.63 |
|  | Los Angeles | 7.00 | 8.25 | 9.25 | 10.50 | 10.99 | 10.63 | 11.30 | 10.56 | 11.80 | 11.70 | 11.63 | 11.58 | 14.37 |
|  | Oakland | 7.00 | 8.25 | 9.25 | 10.50 | 10.99 | 10.63 | 11.30 | 10.56 | 11.80 | 11.70 | 11.63 | 11.58 | 14.37 |
|  | Salinas | 6.70 | 8.25 | 9.25 | 10.50 | 10.99 | 10.63 | 11.30 | 10.56 | 11.80 | 11.70 | 11.63 | 11.58 | 14.37 |
|  | San Bernadino | 7.75 | 9.75 | 10.75 | 13.13 | 13.73 | 11.96 | 13.27 | 14.11 | 15.78 | 15.91 | 15.91 | 15.23 | 20.63 |
|  | San Diego | 6.70 | 8.25 | 9.25 | 10.50 | 10.99 | 10.63 | 11.30 | 10.56 | 11.80 | 11.70 | 11.63 | 11.58 | 14.37 |
|  | San Francisco | 7.00 | 8.25 | 9.25 | 10.50 | 10.99 | 10.63 | 11.30 | 10.56 | 11.80 | 11.70 | 11.63 | 11.58 | 14.37 |
|  | San Jose | 7.00 | 8.25 | 9.25 | 10.50 | 10.99 | 10.63 | 11.30 | 10.56 | 11.80 | 11.70 | 11.63 | 11.58 | 14.37 |
| CO | Boulder | 7.55 | 8.09 | 9.59 | 11.56 | 14.14 | 14.19 | 15.38 | 15.62 | 18.40 | 18.65 | 18.79 | 18.96 | 19.05 |
|  | Col. Springs | 6.51 | 6.97 | 8.80 | 10.24 | 13.15 | 13.07 | 14.20 | 15.00 | 18.18 | 18.32 | 18.15 | 18.29 | 18.37 |
|  | Denver | 7.28 | 7.80 | 9.27 | 11.22 | 13.82 | 13.83 | 14.96 | 15.67 | 18.36 | 18.63 | 18.57 | 18.86 | 18.95 |
| CT | Ansonia | 9.81 | 9.81 | 10.81 | 11.81 | 12.41 | 11.91 | 12.56 | 12.06 | 13.43 | 13.43 | 15.77 | 16.03 | 17.03 |
|  | Norwalk | 10.94 | 10.94 | 11.94 | 12.94 | 13.54 | 13.04 | 13.69 | 13.14 | 14.69 | 14.69 | 14.77 | 15.03 | 16.03 |
| DC | Washington | 8.83 | 12.49 | 13.49 | 17.61 | 17.93 | 18.40 | 19.22 | 18.81 | 19.06 | 19.42 | 19.42 | 19.39 | 18.26 |
| FL | Miami | 12.20 | 12.20 | 13.20 | 13.78 | 14.36 | 13.39 | 14.66 | 14.53 | 14.77 | 14.81 | 14.83 | 14.83 | 14.83 |
|  | Tampa | 11.74 | 11.74 | 12.63 | 14.13 | 14.23 | 14.23 | 15.13 | 15.13 | 15.13 | 15.13 | 15.13 | 15.13 | 15.31 |
|  | W. Palm Beach | 10.95 | 10.95 | 11.95 | 12.80 | 13.30 | 12.40 | 13.65 | 13.91 | 13.69 | 13.83 | 13.83 | 13.83 | 13.83 |
| GA | Albany | 12.00 | 13.35 | 14.85 | 14.55 | 15.95 | 15.95 | 17.36 | 17.36 | 17.15 | 16.50 | 16.50 | 16.50 | 16.50 |
|  | Atlanta | 14.90 | 15.90 | 17.40 | 18.40 | 18.50 | 18.50 | 19.98 | 19.98 | 19.40 | 19.59 | 19.59 | 19.59 | 19.85 |
| HI | Honolulu | 10.90 | 11.40 | 12.40 | 16.10 | 16.70 | 16.70 | 16.40 | 17.00 | 17.00 | 17.00 | 17.07 | 17.33 | 18.01 |
| IL | Chicago | 7.41 | 11.91 | 9.50 | 10.53 | 12.23 | 12.33 | 13.21 | 14.19 | 14.24 | 14.19 | 14.38 | 14.37 | 14.31 |
|  | Decatur | 7.80 | 10.85 | 11.85 | 12.85 | 13.48 | 13.48 | 14.36 | 16.06 | 17.11 | 18.02 | 18.25 | 18.24 | 17.78 |
|  | Rock Island | 8.09 | 11.15 | 12.15 | 13.48 | 14.08 | 14.08 | 14.96 | 16.06 | 17.11 | 18.02 | 18.25 | 18.24 | 17.78 |
| IN | Indianapolis | 13.83 | 15.83 | 18.22 | 18.27 | 17.38 | 16.94 | 18.23 | 18.88 | 18.88 | 18.88 | 18.88 | 18.21 | 17.54 |
|  | Terre Haute | 13.99 | 13.99 | 15.99 | 17.73 | 18.34 | 17.95 | 18.85 | 19.85 | 19.85 | 19.85 | 19.85 | 19.85 | 19.85 |
| IA | Fort Dodge | 7.40 | 7.40 | 8.40 | 11.45 | 11.70 | 9.20 | 10.10 | 10.80 | 12.50 | 12.50 | 12.50 | 12.50 | 12.50 |
| KY | Louisville | 16.53 | 17.99 | 19.70 | 20.70 | 19.50 | 19.15 | 20.05 | 20.05 | 20.65 | 20.65 | 20.65 | 20.65 | 20.65 |
| LA | Baton Rouge | 12.50 | 12.90 | 14.10 | 15.69 | 17.50 | 17.29 | 18.19 | 18.19 | 18.84 | 18.84 | 18.84 | 18.88 | 18.88 |
|  | New Orleans | 13.40 | 13.80 | 14.80 | 16.42 | 18.23 | 18.02 | 18.92 | 18.92 | 19.68 | 19.68 | 19.68 | 18.19 | 18.19 |
| ME | Portland | 10.49 | 11.17 | 13.35 | 20.00 | 15.09 | 15.06 | 15.96 | 15.96 | 15.96 | 15.96 | 15.96 | 15.96 | 16.46 |
| MD | Baltimore | 11.82 | 16.49 | 17.89 | 19.19 | 19.27 | 19.27 | 19.65 | 19.65 | 19.65 | 19.65 | 20.01 | 20.01 | 20.01 |
| MA | Boston | 10.60 | 10.60 | 11.60 | 12.60 | 13.37 | 12.74 | 13.64 | 13.64 | 16.56 | 17.68 | 19.10 | 20.35 | 20.35 |
|  | Hyannis | 8.95 | 8.95 | 9.95 | 10.95 | 11.14 | 11.14 | 12.04 | 12.04 | 15.13 | 16.25 | 17.91 | 20.35 | 20.35 |
|  | Springfield | 10.05 | 10.05 | 11.05 | 12.05 | 12.78 | 12.20 | 13.10 | 13.10 | 16.07 | 17.19 | 19.10 | 20.35 | 20.35 |
| MI | Detroit | 10.65 | 11.86 | 12.86 | 14.08 | 14.68 | 13.23 | 14.59 | 14.35 | 14.33 | 14.48 | 14.50 | 14.50 | 14.46 |
|  | Grand Rapids | 9.72 | 10.84 | 11.84 | 13.28 | 13.66 | 12.21 | 13.57 | 13.33 | 13.31 | 13.46 | 13.46 | 13.48 | 13.95 |
|  | Saginaw | 9.26 | 10.33 | 11.33 | 12.55 | 13.15 | 11.70 | 13.06 | 12.82 | 12.80 | 12.95 | 12.97 | 12.97 | 12.93 |
| MN | Detroit Lakes | 10.72 | 10.72 | 14.98 | 16.19 | 16.58 | 15.80 | 16.51 | 16.51 | 16.51 | 16.51 | 16.51 | 16.51 | 16.51 |
|  | Minneapolis | 11.66 | 11.66 | 16.20 | 17.20 | 17.76 | 16.76 | 17.66 | 17.66 | 17.66 | 17.66 | 18.08 | 18.08 | 18.08 |
| MS | Pascagoula | 17.25 | 17.25 | 18.25 | 21.25 | 20.85 | 20.85 | 21.75 | 21.75 | 21.75 | 21.75 | 21.75 | 21.75 | 21.75 |
| MO | Kansas City | 9.55 | 11.60 | 12.60 | 13.60 | 14.20 | 14.20 | 14.85 | 14.85 | 14.85 | 14.85 | 14.85 | 14.85 | 14.85 |
|  | Mexico | 7.30 | 9.35 | 10.35 | 11.35 | 11.95 | 11.95 | 12.60 | 12.60 | 12.60 | 12.60 | 12.60 | 12.60 | 12.60 |
|  | St. Louis | 9.55 | 11.60 | 12.60 | 13.60 | 14.20 | 14.20 | 14.85 | 14.85 | 14.85 | 14.85 | 14.85 | 14.85 | 14.85 |
| MT | Butte | 8.18 | 8.36 | 12.54 | 15.04 | 15.71 | 16.33 | 17.34 | 17.34 | 17.34 | 17.34 | 17.34 | 17.34 | 17.34 |
| NE | Grand Island | 8.92 | 13.69 | 14.19 | 17.44 | 19.00 | 18.00 | 18.90 | 18.90 | 18.90 | 18.90 | 18.90 | 18.90 | 18.90 |
| NJ | Phillipsburg | 6.70 | 7.00 | 8.45 | 9.45 | 10.05 | 10.05 | 10.95 | 10.95 | 10.95 | 10.95 | 10.95 | 10.95 | 10.95 |
| NM | Alamogordo | 10.47 | 15.37 | 17.81 | 18.78 | 18.80 | 18.91 | 19.40 | 17.16 | 16.84 | 17.09 | 18.11 | 18.28 | 18.45 |
| NY | Binghamton | 11.13 | 12.64 | 13.64 | 15.91 | 18.90 | 16.74 | 17.83 | 18.36 | 21.62 | 21.39 | 21.39 | 23.36 | 23.25 |
|  | Buffalo | 13.96 | 18.85 | 16.85 | 21.52 | 21.72 | 22.63 | 23.73 | 24.42 | 28.13 | 27.85 | 27.85 | 29.84 | 27.43 |
|  | Massena | 8.86 | 10.16 | 11.06 | 13.79 | 14.41 | 14.70 | 15.79 | 16.26 | 19.08 | 19.22 | 19.22 | 21.19 | 21.09 |
|  | New York City | 11.63 | 11.98 | 12.98 | 16.14 | 14.68 | 18.13 | 19.25 | 19.79 | 22.68 | 22.47 | 22.47 | 22.45 | 22.35 |
|  | Ogdensburg | 9.42 | 10.70 | 11.70 | 13.79 | 14.41 | 14.70 | 15.79 | 16.26 | 19.42 | 19.22 | 19.22 | 21.19 | 21.09 |
|  | Rochester | 10.12 | 11.04 | 12.04 | 14.89 | 14.71 | 14.71 | 15.78 | 16.62 | 17.34 | 16.40 | 16.01 | 15.22 | 15.22 |
| NC | Raleigh | 12.84 | 14.97 | 15.30 | 16.30 | 16.35 | 15.11 | 16.01 | 16.01 | 16.01 | 16.01 | 16.01 | 16.01 | 16.04 |
|  | Rockingham | 10.52 | 12.62 | 13.06 | 14.06 | 14.11 | 13.07 | 13.97 | 13.97 | 13.97 | 13.97 | 13.97 | 13.97 | 13.97 |
| OH | Canton | 12.95 | 14.95 | 15.95 | 17.45 | 17.85 | 17.85 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 18.50 |
|  | Cincinnati | 14.00 | 13.21 | 14.21 | 17.44 | 17.54 | 17.54 | 18.07 | 18.07 | 18.44 | 18.44 | 18.44 | 19.57 | 19.57 |
|  | Cleveland | 12.95 | 14.95 | 15.95 | 17.45 | 17.85 | 17.85 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 18.50 |

Appendix 4
Local Rates: 1983-1995

|  |  | Private (Single Party) Residential Rotary Access Line <br> clude Subscriber Line Charges. Rates are for unlimited calling where offered, r measured service with 100 five minute calls elsewhere. Rates exclude taxes. |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Excluding Surcharges |  |  | Including Surcharges Accounted as Company Revenue |  |  |  |  |  |  |  |  |  |
|  |  | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| OH | Columbus | \$12.95 | \$14.95 | \$15.95 | \$17.45 | \$17.93 | \$17.85 | \$18.75 | \$18.75 | \$18.75 | \$18.75 | \$18.75 | \$18.75 | \$18.50 |
|  | Toledo | 12.95 | 14.95 | 15.95 | 17.45 | 17.85 | 17.85 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 | 18.50 |
| OR | Corvallis | 12.85 | 13.60 | 15.41 | 18.41 | 17.01 | 17.01 | 17.54 | 18.07 | 18.07 | 17.60 | 17.54 | 16.79 | 17.29 |
|  | Portland | 13.30 | 15.88 | 17.33 | 20.33 | 19.18 | 19.05 | 19.58 | 20.17 | 20.17 | 19.43 | 19.60 | 16.79 | 18.84 |
| PA | Allentown | 8.26 | 10.58 | 11.95 | 12.95 | 13.55 | 13.63 | 14.25 | 14.55 | 14.55 | 14.55 | 14.85 | 14.85 | 14.85 |
|  | Ellwood City | 7.46 | 9.28 | 10.65 | 11.65 | 12.25 | 12.39 | 13.01 | 13.25 | 13.25 | 13.25 | 13.55 | 15.25 | 15.25 |
|  | Johnstown | 11.25 | 11.26 | 13.11 | 15.06 | 15.66 | 14.65 | 16.61 | 16.57 | 17.18 | 16.88 | 16.82 | 17.28 | 17.14 |
|  | New Castle | 7.46 | 9.28 | 10.65 | 11.65 | 12.25 | 12.39 | 13.01 | 13.25 | 13.25 | 13.25 | 13.55 | 13.55 | 13.55 |
|  | Philadelphia | 9.46 | 12.28 | 13.40 | 14.70 | 15.00 | 14.87 | 15.49 | 15.85 | 15.85 | 15.85 | 16.15 | 16.15 | 16.15 |
|  | Pittsburgh | 9.46 | 12.28 | 13.40 | 14.40 | 15.00 | 14.87 | 15.49 | 15.85 | 15.85 | 15.85 | 16.15 | 16.15 | 16.15 |
|  | Scranton | 7.86 | 10.58 | 11.95 | 12.95 | 13.55 | 13.63 | 14.25 | 14.55 | 14.55 | 14.55 | 14.85 | 14.85 | 14.85 |
| RI | Providence | 15.80 | 15.80 | 18.68 | 19.68 | 19.24 | 19.24 | 20.14 | 20.14 | 20.14 | 20.14 | 20.39 | 20.76 | 20.76 |
| SC | Beaufort | 11.50 | 11.50 | 12.50 | 13.50 | 12.95 | 16.63 | 17.53 | 17.53 | 18.27 | 18.27 | 18.27 | 18.27 | 18.27 |
| TN | Memphis | 12.65 | 13.15 | 14.15 | 15.15 | 15.75 | 15.75 | 16.65 | 15.65 | 16.43 | 16.43 | 16.43 | 16.43 | 16.43 |
|  | Nashville | 12.35 | 12.85 | 13.85 | 14.85 | 15.45 | 15.45 | 16.35 | 15.62 | 15.65 | 15.65 | 15.65 | 15.65 | 15.65 |
| TX | Brownsville | 8.50 | 8.80 | 9.80 | 10.80 | 11.40 | 11.40 | 12.30 | 12.30 | 12.30 | 12.30 | 12.30 | 12.30 | 12.30 |
|  | Corpus Christi | 8.80 | 9.10 | 10.10 | 11.10 | 11.70 | 11.70 | 12.60 | 12.60 | 12.60 | 12.60 | 12.60 | 12.60 | 12.60 |
|  | Dallas | 10.10 | 10.40 | 11.40 | 12.40 | 13.00 | 13.00 | 13.90 | 13.90 | 13.90 | 13.90 | 13.90 | 13.90 | 13.90 |
|  | Fort Worth | 9.55 | 9.85 | 10.85 | 11.85 | 12.45 | 12.45 | 13.35 | 13.35 | 13.35 | 13.35 | 13.35 | 13.35 | 13.35 |
|  | Houston | 10.75 | 11.05 | 12.05 | 13.05 | 13.65 | 13.65 | 14.55 | 14.55 | 14.55 | 14.55 | 14.55 | 14.55 | 14.55 |
|  | San Antonio | 9.55 | 9.85 | 10.85 | 11.85 | 12.45 | 12.45 | 13.35 | 13.35 | 13.35 | 13.35 | 13.35 | 13.35 | 13.35 |
| UT | Logan | 7.80 | 9.72 | 10.58 | 17.27 | 17.87 | 17.34 | 14.23 | 14.58 | 13.92 | 13.92 | 13.92 | 13.92 | 13.96 |
| VA | Richmond | 11.79 | 15.22 | 16.22 | 17.22 | 17.32 | 16.82 | 17.37 | 17.09 | 17.09 | 17.09 | 17.67 | 17.67 | 17.76 |
|  | Smithfield | 7.05 | 8.88 | 9.88 | 11.26 | 10.86 | 11.48 | 12.13 | 12.13 | 11.92 | 11.92 | 11.92 | 11.92 | 11.92 |
| WA | Everett | 13.34 | 13.58 | 14.58 | 16.28 | 16.74 | 16.74 | 17.64 | 17.64 | 17.64 | 17.64 | 16.25 | 16.25 | 16.25 |
|  | Seattle | 12.50 | 12.89 | 13.89 | 15.00 | 14.22 | 14.10 | 15.00 | 15.46 | 15.37 | 15.29 | 16.01 | 15.96 | 15.16 |
| WV | Huntington | 16.80 | 19.42 | 24.39 | 25.39 | 25.99 | 25.99 | 25.50 | 25.50 | 25.50 | 25.50 | 25.50 | 25.50 | 25.50 |
| WI | Milwaukee | 13.00 | 17.50 | 18.20 | 18.65 | 19.15 | 19.15 | 18.44 | 20.05 | 15.10 | 15.10 | 15.10 | 14.50 | 14.50 |
|  | Racine | 11.50 | 16.00 | 16.70 | 17.15 | 17.50 | 17.50 | 16.79 | 18.40 | 15.10 | 15.10 | 15.10 | 14.50 | 14.50 |

Appendix 4
Local Rates: 1983-1995
Connection of a Rotary Residential Access Line
Rates do not include additional charges, if any, for drop line and connection block.
Rates exclude taxes.

|  |  | Excluding Surcharges |  |  | Including Surcharges Accounted as Company Revenue |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| AL | Huntsville | \$49.75 | \$65.50 | \$65.50 | \$59.90 | \$43.00 | \$43.00 | \$43.00 | \$43.00 | \$43.00 | \$40.00 | \$40.00 | \$40.00 | \$40.00 |
| AK | Anchorage | 25.50 | 25.50 | 25.50 | 25.00 | 25.50 | 25.50 | 25.50 | 25.50 | 25.50 | 25.50 | 25.50 | 25.50 | 25.50 |
| AZ | Tuscon | 69.50 | 69.50 | 69.50 | 46.50 | 46.70 | 46.50 | 46.59 | 46.59 | 46.59 | 46.59 | 46.59 | 46.59 | 46.59 |
| AR | West Memphis | 51.85 | 51.85 | 45.00 | 45.00 | 45.00 | 39.70 | 39.70 | 39.70 | 39.70 | 39.70 | 39.70 | 39.70 | 39.70 |
|  | Pine Bluff | 51.85 | 51.85 | 45.00 | 45.00 | 45.00 | 39.70 | 39.70 | 39.70 | 39.70 | 39.70 | 39.70 | 39.70 | 39.70 |
| CA | Anaheim | 23.00 | 34.50 | 34.50 | 36.38 | 34.94 | 33.50 | 33.12 | 33.12 | 34.59 | 34.30 | 34.11 | 33.95 | 33.87 |
|  | Bakersfield | 23.00 | 34.50 | 34.50 | 36.38 | 34.94 | 33.50 | 33.12 | 33.12 | 34.59 | 34.30 | 34.11 | 33.95 | 33.87 |
|  | Fresno | 23.00 | 34.50 | 34.50 | 36.38 | 34.94 | 33.50 | 33.12 | 33.12 | 34.59 | 34.30 | 34.11 | 33.95 | 33.87 |
|  | Long Beach | 22.00 | 40.00 | 40.00 | 44.70 | 41.14 | 38.74 | 40.05 | 49.00 | 54.79 | 55.25 | 55.25 | 52.89 | 45.73 |
|  | Los Angeles | 23.00 | 34.50 | 34.50 | 36.38 | 34.94 | 33.50 | 33.12 | 33.12 | 34.59 | 34.30 | 34.11 | 33.95 | 33.87 |
|  | Oakland | 23.00 | 34.50 | 34.50 | 36.38 | 34.94 | 33.50 | 33.12 | 33.12 | 34.59 | 34.30 | 34.11 | 33.95 | 33.87 |
|  | Salinas | 23.00 | 34.50 | 34.50 | 36.38 | 34.94 | 33.50 | 33.12 | 33.12 | 34.59 | 34.30 | 34.11 | 33.95 | 33.87 |
|  | San Bernadino | 22.00 | 40.00 | 40.00 | 44.70 | 41.14 | 38.74 | 40.05 | 49.00 | 54.79 | 55.25 | 55.25 | 52.89 | 45.73 |
|  | San Diego | 23.00 | 34.50 | 34.50 | 36.38 | 34.94 | 33.50 | 33.12 | 33.12 | 34.59 | 34.30 | 34.11 | 33.95 | 33.87 |
|  | San Francisco | 23.00 | 34.50 | 34.50 | 36.38 | 34.94 | 33.50 | 33.12 | 33.12 | 34.59 | 34.30 | 34.11 | 33.95 | 33.87 |
|  | San Jose | 23.00 | 34.50 | 34.50 | 36.38 | 34.94 | 33.50 | 33.12 | 33.12 | 34.59 | 34.30 | 34.11 | 33.95 | 33.87 |
| CO | Boulder | 59.15 | 59.15 | 59.15 | 59.15 | 53.00 | 53.00 | 53.00 | 53.00 | 35.00 | 35.00 | 35.00 | 35.00 | 35.00 |
|  | Col. Springs | 59.15 | 59.15 | 59.15 | 59.15 | 53.00 | 53.00 | 53.00 | 53.00 | 35.00 | 35.00 | 35.00 | 35.00 | 35.00 |
|  | Denver | 59.15 | 59.15 | 59.15 | 59.15 | 53.00 | 53.00 | 53.00 | 53.00 | 35.00 | 35.00 | 35.00 | 35.00 | 35.00 |
| CT | Ansonia | 37.75 | 37.75 | 37.75 | 37.75 | 37.75 | 37.75 | 37.75 | 35.73 | 35.73 | 35.73 | 45.00 | 45.00 | 45.00 |
|  | Norwalk | 37.75 | 37.75 | 37.75 | 37.75 | 37.75 | 37.75 | 37.75 | 35.73 | 35.73 | 35.73 | 45.00 | 45.00 | 45.00 |
| DC | Washington | 9.00 | 25.00 | 25.00 | 32.15 | 31.57 | 32.27 | 32.87 | 32.68 | 33.12 | 30.76 | 30.76 | 30.76 | 30.76 |
| FL | Miami | 44.50 | 44.50 | 44.50 | 44.50 | 44.50 | 44.50 | 44.56 | 44.55 | 44.50 | 44.50 | 44.50 | 40.00 | 40.00 |
|  | Tampa | 48.25 | 48.25 | 48.25 | 48.25 | 48.25 | 48.25 | 48.25 | 48.25 | 48.25 | 48.25 | 55.00 | 55.00 | 55.00 |
|  | W. Palm Beach | 44.50 | 44.50 | 44.50 | 44.50 | 44.50 | 44.50 | 44.56 | 44.55 | 44.50 | 44.50 | 44.50 | 40.00 | 40.00 |
| GA | Albany | 41.00 | 41.00 | 42.50 | 42.50 | 42.50 | 42.50 | 42.50 | 42.50 | 42.50 | 42.50 | 42.50 | 42.50 | 42.50 |
|  | Atlanta | 41.00 | 41.00 | 42.50 | 42.50 | 42.50 | 42.50 | 42.50 | 42.50 | 42.50 | 42.50 | 42.50 | 42.50 | 42.50 |
| HI | Honolulu | 27.00 | 51.00 | 60.00 | 45.50 | 45.50 | 45.50 | 45.50 | 45.50 | 45.50 | 45.50 | 45.50 | 45.50 | 45.50 |
| IL | Chicago | 33.00 | 36.88 | 44.50 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 |
|  | Decatur | 33.00 | 36.88 | 44.50 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 |
|  | Rock Island | 33.00 | 36.88 | 44.50 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 |
| IN | Indianapolis | 43.00 | 43.00 | 43.00 | 54.00 | 54.00 | 47.00 | 47.00 | 47.00 | 47.00 | 47.00 | 47.00 | 47.00 | 47.00 |
|  | Terre Haute | 31.55 | 31.55 | 31.55 | 31.55 | 31.55 | 57.20 | 57.20 | 57.20 | 57.20 | 57.20 | 57.20 | 57.20 | 57.20 |
| IA | Fort Dodge | 19.00 | 19.00 | 19.00 | 19.00 | 16.90 | 16.90 | 16.90 | 16.90 | 9.35 | 9.35 | 9.35 | 9.35 | 9.35 |
| KY | Louisville | 42.75 | 39.00 | 39.00 | 39.00 | 39.00 | 34.50 | 34.50 | 34.50 | 34.50 | 34.50 | 34.50 | 34.50 | 34.50 |
| LA | Baton Rouge | 24.00 | 59.00 | 59.00 | 61.65 | 61.65 | 61.65 | 61.65 | 61.65 | 61.65 | 63.50 | 50.00 | 50.00 | 43.00 |
|  | New Orleans | 24.00 | 59.00 | 59.00 | 61.65 | 61.65 | 61.65 | 61.65 | 61.65 | 61.65 | 64.12 | 51.50 | 50.00 | 43.00 |
| ME | Portland | 40.50 | 45.75 | 44.75 | 44.75 | 44.75 | 44.75 | 44.75 | 44.75 | 44.75 | 44.75 | 44.75 | 44.75 | 44.75 |
| MD | Baltimore | 24.53 | 37.00 | 48.00 | 48.00 | 48.00 | 48.00 | 48.00 | 48.00 | 48.00 | 48.00 | 48.00 | 48.00 | 48.00 |
| MA | Boston | 32.75 | 32.75 | 32.75 | 32.75 | 31.77 | 31.77 | 31.77 | 31.77 | 34.79 | 37.07 | 37.07 | 37.07 | 37.07 |
|  | Hyannis | 32.75 | 32.75 | 32.75 | 32.75 | 31.77 | 31.77 | 31.77 | 31.77 | 34.79 | 37.07 | 37.07 | 37.07 | 37.07 |
|  | Springfield | 32.75 | 32.75 | 32.75 | 32.75 | 31.77 | 31.77 | 31.77 | 31.77 | 34.79 | 37.07 | 37.07 | 37.07 | 37.07 |
| Ml | Detroit | 16.39 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 |
|  | Grand Rapids | 16.39 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 |
|  | Saginaw | 16.39 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 |
| MN | Detroit Lakes | 31.95 | 32.00 | 32.00 | 32.00 | 32.00 | 32.00 | 32.00 | 32.00 | 32.00 | 16.25 | 16.25 | 16.25 | 16.25 |
|  | Minneapolis | 31.95 | 32.00 | 32.00 | 32.00 | 32.00 | 32.00 | 32.00 | 32.00 | 32.00 | 16.25 | 16.25 | 16.25 | 16.25 |
| MS | Pascagoula | 24.50 | 65.50 | 56.50 | 65.50 | 33.50 | 33.50 | 33.50 | 33.50 | 33.50 | 33.50 | 46.00 | 46.00 | 46.00 |
| MO | Kansas City | 21.90 | 39.00 | 39.00 | 47.40 | 47.40 | 47.40 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 |
|  | Mexico | 21.90 | 39.00 | 39.00 | 47.40 | 47.40 | 47.40 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 |
|  | St. Louis | 21.90 | 39.00 | 39.00 | 47.40 | 47.40 | 47.40 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 |
| MT | Butte | 30.00 | 33.00 | 43.15 | 44.15 | 44.15 | 35.30 | 35.30 | 35.30 | 35.30 | 35.30 | 35.30 | 35.30 | 25.00 |
| NE | Grand Island | 21.20 | 24.40 | 24.40 | 27.20 | 27.20 | 27.20 | 42.00 | 42.00 | 42.00 | 42.00 | 28.00 | 28.00 | 28.00 |
| NJ | Phillipsburg | 22.50 | 28.50 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 |
| NM | Alamogordo | 27.55 | 46.50 | 46.50 | 50.00 | 50.00 | 50.00 | 50.00 | 47.50 | 47.50 | 45.15 | 30.00 | 30.00 | 30.00 |
| NY | Binghamton | 46.00 | 55.50 | 55.50 | 60.84 | 54.71 | 56.91 | 56.91 | 58.55 | 59.00 | 58.40 | 58.40 | 58.34 | 58.07 |
|  | Buffalo | 46.00 | 55.50 | 55.50 | 60.84 | 54.71 | 57.45 | 57.45 | 59.08 | 60.04 | 59.43 | 59.43 | 59.38 | 59.10 |
|  | Massena | 46.00 | 55.50 | 55.50 | 60.84 | 54.71 | 57.10 | 57.10 | 58.73 | 59.20 | 58.59 | 58.59 | 58.54 | 58.26 |
|  | New York City | 46.00 | 55.50 | 55.50 | 60.84 | 54.71 | 58.12 | 58.12 | 59.76 | 60.27 | 59.72 | 59.72 | 59.66 | 59.39 |
|  | Ogdensburg | 46.00 | 55.50 | 55.50 | 60.84 | 54.71 | 57.10 | 57.10 | 58.74 | 59.20 | 58.60 | 58.60 | 58.54 | 58.27 |
|  | Rochester | 31.50 | 31.50 | 31.50 | 32.50 | 28.99 | 28.99 | 29.09 | 32.99 | 35.08 | 36.20 | 35.33 | 33.32 | 33.32 |
| NC | Raleigh | 42.10 | 47.00 | 42.75 | 42.75 | 42.75 | 42.75 | 42.75 | 42.75 | 42.75 | 42.75 | 42.75 | 42.75 | 42.75 |
|  | Rockingham | 42.10 | 47.00 | 42.75 | 42.75 | 42.75 | 42.75 | 42.75 | 42.75 | 42.75 | 42.75 | 42.75 | 42.75 | 42.75 |
| OH | Canton | 58.00 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 |
|  | Cincinnati | 24.45 | 22.30 | 22.60 | 24.25 | 24.25 | 24.25 | 24.25 | 24.25 | 24.25 | 24.25 | 24.25 | 25.70 | 25.70 |
|  | Cleveland | 58.00 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 |

Appendix 4 Local Rates: 1983-1995

|  |  | Connection of a Rotary Residential Access Line <br> Rates do not include additional charges, if any, for drop line and connection block. Rates exclude taxes. |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Excluding Surcharges |  |  | Including Surcharges Accounted as Company Revenue |  |  |  |  |  |  |  |  |  |
|  |  | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| OH | Columbus | \$58.00 | \$36.50 | \$36.50 | \$36.50 | \$36.50 | \$36.50 | \$36.50 | \$36.50 | \$36.50 | \$36.50 | \$36.50 | \$36.50 | \$36.50 |
|  | Toledo | 58.00 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 | 36.50 |
| OR | Corvallis | 29.00 | 29.00 | 31.00 | 31.00 | 12.00 | 12.00 | 12.00 | 12.36 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
|  | Portland | 29.00 | 29.00 | 31.00 | 31.00 | 12.00 | 12.00 | 12.00 | 12.36 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| PA | Allentown | 28.50 | 53.50 | 53.50 | 53.50 | 53.50 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 |
|  | Ellwood City | 28.50 | 53.50 | 53.50 | 53.50 | 53.50 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 |
|  | Johnstown | 47.65 | 47.65 | 47.65 | 61.50 | 61.50 | 57.53 | 61.69 | 59.81 | 61.99 | 53.12 | 52.70 | 52.70 | 52.70 |
|  | New Castle | 28.50 | 53.50 | 53.50 | 53.50 | 53.50 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 |
|  | Philadelphia | 28.50 | 53.50 | 53.50 | 53.50 | 53.50 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 |
|  | Pittsburgh | 28.50 | 53.50 | 53.50 | 53.50 | 53.50 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 |
|  | Scranton | 28.50 | 53.50 | 53.50 | 53.50 | 53.50 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 |
| RI | Providence | 22.00 | 22.00 | 28.40 | 28.40 | 28.40 | 28.40 | 28.40 | 28.40 | 28.40 | 28.40 | 28.40 | 33.83 | 33.83 |
| SC | Beaufort | 25.50 | 25.50 | 25.50 | 25.00 | 35.00 | 32.30 | 32.30 | 32.30 | 32.30 | 32.30 | 32.30 | 32.30 | 32.30 |
| TN | Memphis | 26.40 | 51.50 | 51.50 | 51.50 | 41.50 | 41.50 | 41.50 | 41.50 | 43.58 | 43.58 | 43.58 | 43.58 | 43.58 |
|  | Nashville | 26.40 | 51.50 | 51.50 | 51.50 | 41.50 | 41.50 | 41.50 | 41.50 | 41.50 | 41.50 | 41.50 | 41.50 | 41.50 |
| TX | Brownsville | 64.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 38.35 | 38.35 | 38.35 | 38.35 | 38.35 |
|  | Corpus Christi | 64.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 38.35 | 38.35 | 38.35 | 38.35 | 38.35 |
|  | Dallas | 64.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 38.35 | 38.35 | 38.35 | 38.35 | 38.35 |
|  | Fort Worth | 64.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 38.35 | 38.35 | 38.35 | 38.35 | 38.35 |
|  | Houston | 64.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 38.35 | 38.35 | 38.35 | 38.35 | 38.35 |
|  | San Antonio | 64.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 38.35 | 38.35 | 38.35 | 38.35 | 38.35 |
| UT | Logan | 28.40 | 43.00 | 43.00 | 43.00 | 43.00 | 35.50 | 29.50 | 29.50 | 18.75 | 18.75 | 18.75 | 18.75 | 18.75 |
| VA | Richmond | 21.22 | 38.50 | 38.50 | 38.50 | 38.50 | 38.50 | 38.50 | 38.50 | 38.50 | 38.50 | 38.50 | 38.50 | 38.50 |
|  | Smithfield | 11.00 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 |
| WA | Everett | 30.00 | 30.00 | 29.00 | 29.00 | 29.00 | 29.00 | 29.00 | 29.00 | 29.00 | 29.00 | 39.00 | 39.00 | 39.00 |
|  | Seattle | 27.00 | 27.00 | 27.00 | 31.00 | 31.00 | 31.00 | 31.00 | 33.62 | 33.44 | 33.26 | 33.08 | 32.98 | 32.98 |
| WV | Huntington | 30.00 | 40.00 | 47.00 | 47.00 | 47.00 | 47.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 |
| WI | Milwaukee | 34.35 | 35.05 | 35.05 | 35.05 | 33.05 | 33.05 | 33.05 | 33.05 | 33.05 | 33.05 | 33.05 | 33.05 | 33.05 |
|  | Racine | 34.35 | 35.05 | 35.05 | 35.05 | 33.05 | 33.05 | 33.05 | 33.05 | 33.05 | 33.05 | 33.05 | 33.05 | 33.05 |

Appendix 4
Local Rates: 1983-1995
Single Line Business Touch-Tone Access Line
Rates include Subscriber Line Charges. Rates are for unlimited calling where offered, and are for measured service with 200 five minute calls elsewhere. Rates exclude taxes.

|  |  | Excluding Surcharges |  |  | Including Including Surcharges |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| AL | Huntsville | \$41.95 | \$45.15 | \$53.20 | \$54.20 | \$52.79 | \$53.53 | \$53.93 | \$53.93 | \$53.93 | \$54.28 | \$53.98 | \$53.04 | \$48.99 |
| AK | Anchorage | 19.65 | 19.65 | 20.65 | 21.65 | 22.25 | 22.25 | 21.35 | 21.35 | 21.35 | 27.75 | 31.80 | 29.25 | 29.25 |
| AZ | Tuscon | 24.32 | 29.28 | 30.28 | 32.33 | 32.93 | 32.93 | 29.67 | 29.67 | 35.57 | 35.57 | 35.57 | 35.57 | 36.35 |
| AR | West Memphis | 30.95 | 35.00 | 39.61 | 40.46 | 41.06 | 41.06 | 41.96 | 45.98 | 45.98 | 45.98 | 45.98 | 44.23 | 44.23 |
|  | Pine Bluff | 28.15 | 29.45 | 33.56 | 34.41 | 35.01 | 35.01 | 35.91 | 35.91 | 35.91 | 35.91 | 35.91 | 34.16 | 34.16 |
| CA | Anaheim | 22.70 | 26.05 | 27.05 | 28.05 | 28.65 | 28.65 | 28.19 | 26.33 | 27.72 | 27.49 | 27.34 | 27.21 | 28.15 |
|  | Bakersfield | 23.30 | 26.55 | 27.55 | 28.55 | 29.15 | 29.25 | 28.76 | 26.86 | 28.32 | 28.08 | 27.93 | 27.80 | 28.73 |
|  | Fresno | 24.10 | 27.35 | 28.35 | 29.35 | 29.95 | 30.05 | 29.52 | 27.58 | 29.11 | 28.87 | 28.72 | 28.58 | 28.73 |
|  | Long Beach | 18.45 | 22.95 | 23.95 | 24.95 | 25.55 | 25.55 | 27.89 | 31.80 | 34.07 | 34.35 | 34.35 | 32.88 | 38.50 |
|  | Los Angeles | 22.70 | 26.05 | 27.05 | 28.05 | 28.65 | 28.65 | 28.19 | 26.33 | 27.72 | 27.49 | 27.34 | 27.21 | 28.15 |
|  | Oakland | 22.70 | 26.05 | 27.05 | 28.05 | 28.65 | 28.65 | 28.19 | 26.33 | 27.72 | 27.49 | 27.34 | 27.21 | 28.15 |
|  | Salinas | 24.20 | 27.45 | 28.45 | 29.45 | 30.05 | 30.15 | 29.62 | 27.66 | 28.42 | 28.18 | 28.03 | 27.89 | 28.83 |
|  | San Bernadino | 18.45 | 22.95 | 23.95 | 24.95 | 25.55 | 25.55 | 26.48 | 28.17 | 34.07 | 34.35 | 34.35 | 32.88 | 38.50 |
|  | San Diego | 22.70 | 26.05 | 27.05 | 28.05 | 28.65 | 28.65 | 28.19 | 26.33 | 27.72 | 27.49 | 27.34 | 27.21 | 28.15 |
|  | San Francisco | 22.70 | 26.05 | 27.05 | 28.05 | 28.65 | 28.65 | 28.19 | 26.33 | 27.72 | 27.49 | 27.34 | 27.21 | 28.15 |
|  | San Jose | 22.70 | 26.05 | 27.05 | 28.05 | 28.65 | 28.65 | 28.19 | 26.33 | 27.72 | 27.49 | 27.34 | 27.21 | 28.15 |
| CO | Boulder | 27.27 | 29.10 | 33.50 | 36.35 | 37.76 | 36.32 | 39.13 | 39.83 | 41.67 | 41.94 | 42.41 | 42.23 | 42.32 |
|  | Col. Springs | 22.22 | 23.80 | 27.56 | 30.07 | 31.96 | 30.65 | 32.83 | 35.49 | 39.12 | 39.74 | 40.59 | 40.73 | 40.81 |
|  | Denver | 26.53 | 28.41 | 32.71 | 35.52 | 36.97 | 35.53 | 38.10 | 39.62 | 41.59 | 41.90 | 41.92 | 42.00 | 42.10 |
| CT | Ansonia | 29.33 | 29.33 | 30.33 | 31.33 | 31.93 | 31.93 | 32.08 | 32.08 | 32.41 | 32.41 | 38.29 | 37.33 | 40.03 |
|  | Norwalk | 32.72 | 32.72 | 33.72 | 34.72 | 35.32 | 35.32 | 35.47 | 35.47 | 36.15 | 35.45 | 35.45 | 34.63 | 37.33 |
| DC | Washington | 18.49 | 32.35 | 33.35 | 30.30 | 30.14 | 29.68 | 32.68 | 31.70 | 31.84 | 31.16 | 32.69 | 31.47 | 31.46 |
| FL | Miami | 30.65 | 30.65 | 31.65 | 32.65 | 32.70 | 32.70 | 34.62 | 34.49 | 34.90 | 35.04 | 35.06 | 34.02 | 34.02 |
|  | Tampa | 32.05 | 32.05 | 32.47 | 33.47 | 34.07 | 34.07 | 35.89 | 34.22 | 34.22 | 34.22 | 33.22 | 33.22 | 33.40 |
|  | W. Palm Beach | 27.30 | 27.30 | 28.30 | 29.30 | 30.20 | 30.20 | 31.92 | 32.74 | 32.22 | 32.55 | 32.55 | 31.53 | 31.53 |
| GA | Albany | 29.85 | 34.00 | 36.05 | 37.05 | 36.90 | 36.90 | 38.93 | 38.93 | 37.80 | 35.30 | 35.30 | 35.30 | 35.30 |
|  | Atlanta | 41.65 | 43.30 | 44.35 | 45.35 | 45.95 | 46.20 | 48.69 | 48.69 | 47.57 | 47.57 | 47.57 | 47.57 | 52.32 |
| HI | Honolulu | 32.10 | 33.50 | 34.50 | 39.05 | 39.65 | 39.65 | 37.45 | 39.00 | 39.00 | 39.00 | 39.00 | 39.67 | 41.42 |
| IL | Chicago | 20.58 | 27.73 | 28.73 | 29.73 | 30.33 | 30.33 | 31.13 | 28.96 | 29.01 | 28.92 | 29.15 | 29.14 | 27.37 |
|  | Decatur | 22.19 | 27.23 | 28.23 | 29.23 | 29.83 | 29.78 | 30.66 | 33.29 | 33.34 | 33.25 | 33.48 | 33.47 | 31.66 |
|  | Rock Island | 24.13 | 29.18 | 30.18 | 31.18 | 31.78 | 31.73 | 32.61 | 33.29 | 33.34 | 33.25 | 33.48 | 33.47 | 31.66 |
| IN | Indianapolis | 47.25 | 53.75 | 58.40 | 64.08 | 56.18 | 54.41 | 55.31 | 55.96 | 55.96 | 55.09 | 55.01 | 52.44 | 51.73 |
|  | Terre Haute | 39.83 | 39.83 | 41.83 | 43.57 | 43.96 | 40.99 | 41.89 | 42.89 | 42.89 | 42.89 | 42.89 | 42.89 | 42.89 |
| IA | Fort Dodge | 15.70 | 15.70 | 16.70 | 17.70 | 16.75 | 16.75 | 17.65 | 18.90 | 20.25 | 20.25 | 20.25 | 20.25 | 20.25 |
| KY | Louisville | 50.23 | 54.94 | 57.99 | 58.99 | 54.38 | 53.36 | 54.26 | 54.26 | 55.89 | 55.89 | 55.89 | 55.89 | 55.89 |
| LA | Baton Rouge | 36.15 | 38.60 | 40.25 | 41.25 | 43.85 | 45.61 | 46.51 | 46.51 | 48.18 | 48.18 | 48.05 | 45.22 | 45.22 |
|  | New Orleans | 38.95 | 41.40 | 42.40 | 43.40 | 46.00 | 47.85 | 48.75 | 48.75 | 50.70 | 50.21 | 50.08 | 45.80 | 45.80 |
| ME | Portland | 29.54 | 32.90 | 37.69 | 42.35 | 36.35 | 36.21 | 37.11 | 37.11 | 37.11 | 37.11 | 37.11 | 37.11 | 35.36 |
| MD | Baltimore | 30.19 | 33.20 | 34.60 | 35.90 | 35.98 | 35.98 | 36.36 | 36.36 | 36.36 | 36.36 | 35.44 | 35.44 | 35.44 |
| MA | Boston | 33.52 | 33.52 | 34.52 | 33.72 | 33.22 | 33.22 | 34.12 | 34.12 | 40.14 | 50.02 | 46.02 | 39.96 | 39.56 |
|  | Hyannis | 29.00 | 29.00 | 30.00 | 29.20 | 28.84 | 28.84 | 29.74 | 29.74 | 29.74 | 40.15 | 43.38 | 43.38 | 43.38 |
|  | Springfield | 31.98 | 31.98 | 32.98 | 32.18 | 31.73 | 31.73 | 32.63 | 32.63 | 34.47 | 35.96 | 35.96 | 35.96 | 35.96 |
| MI | Detroit | 28.40 | 29.52 | 30.52 | 31.74 | 32.34 | 32.34 | 32.25 | 32.01 | 32.01 | 32.14 | 32.14 | 32.16 | 32.41 |
|  | Grand Rapids | 28.40 | 29.52 | 30.52 | 31.74 | 32.34 | 32.34 | 32.25 | 32.01 | 32.01 | 32.14 | 32.14 | 32.16 | 32.41 |
|  | Saginaw | 28.40 | 29.52 | 30.52 | 31.74 | 32.34 | 32.34 | 32.25 | 32.01 | 32.01 | 32.14 | 32.14 | 32.16 | 32.41 |
| MN | Detroit Lakes | 30.38 | 35.54 | 38.58 | 39.58 | 39.67 | 37.80 | 38.70 | 38.23 | 38.23 | 38.23 | 38.23 | 38.23 | 38.23 |
|  | Minneapolis | 40.96 | 47.95 | 48.74 | 49.75 | 49.69 | 47.28 | 48.18 | 48.18 | 48.18 | 48.18 | 49.45 | 49.45 | 49.45 |
| MS | Pascagoula | 45.80 | 45.80 | 46.80 | 48.80 | 49.40 | 49.40 | 50.30 | 50.30 | 50.30 | 50.30 | 50.30 | 50.30 | 50.30 |
| MO | Kansas City | 32.70 | 38.55 | 39.55 | 40.60 | 41.20 | 41.20 | 40.93 | 40.93 | 40.93 | 40.93 | 40.93 | 37.77 | 37.05 |
|  | Mexico | 23.05 | 28.10 | 29.10 | 30.15 | 30.75 | 30.75 | 30.48 | 30.48 | 30.48 | 30.48 | 30.48 | 27.32 | 26.60 |
|  | St. Louis | 32.70 | 38.55 | 39.55 | 40.60 | 41.20 | 41.20 | 40.93 | 40.93 | 40.93 | 40.93 | 40.93 | 37.77 | 37.05 |
| MT | Butte | 31.58 | 32.06 | 45.07 | 46.87 | 43.58 | 43.79 | 45.00 | 43.59 | 43.59 | 43.59 | 42.19 | 42.19 | 42.19 |
| NE | Grand Island | 23.87 | 35.27 | 36.27 | 41.72 | 42.32 | 41.15 | 42.05 | 42.05 | 42.05 | 42.05 | 42.05 | 42.05 | 42.05 |
| NJ | Phillipsburg | 20.37 | 21.32 | 22.77 | 23.77 | 24.37 | 24.37 | 25.27 | 25.27 | 25.27 | 25.27 | 25.27 | 25.27 | 25.27 |
| NM | Alamogordo | 29.27 | 42.58 | 47.18 | 48.18 | 48.16 | 52.17 | 53.58 | 50.56 | 49.99 | 50.46 | 50.36 | 50.53 | 50.70 |
| NY | Binghamton | 28.90 | 29.48 | 30.48 | 35.49 | 36.09 | 36.09 | 39.69 | 40.84 | 47.21 | 46.36 | 46.36 | 44.79 | 44.58 |
|  | Buffalo | 28.90 | 29.48 | 30.48 | 35.49 | 36.09 | 36.09 | 40.45 | 41.60 | 48.04 | 47.18 | 47.18 | 45.59 | 45.38 |
|  | Massena | 28.22 | 31.49 | 32.49 | 37.44 | 36.09 | 36.09 | 39.82 | 40.97 | 47.37 | 46.51 | 46.51 | 44.95 | 44.73 |
|  | New York City | 30.90 | 31.48 | 32.48 | 39.69 | 40.29 | 40.29 | 45.56 | 46.84 | 48.22 | 47.40 | 47.40 | 45.81 | 45.60 |
|  | Ogdensburg | 31.58 | 31.58 | 32.58 | 41.93 | 42.53 | 42.53 | 46.12 | 47.47 | 47.37 | 46.51 | 46.51 | 44.95 | 44.74 |
|  | Rochester | 29.34 | 29.34 | 31.15 | 32.32 | 32.53 | 32.53 | 41.88 | 42.65 | 45.88 | 46.16 | 45.04 | 44.60 | 44.44 |
| NC | Raleigh | 35.05 | 41.63 | 40.80 | 41.80 | 42.40 | 38.44 | 39.34 | 39.34 | 39.34 | 39.34 | 39.34 | 39.14 | 38.96 |
|  | Rockingham | 29.61 | 35.13 | 34.58 | 35.58 | 36.18 | 32.77 | 33.67 | 33.67 | 33.67 | 33.67 | 33.67 | 33.47 | 33.22 |
| OH | Canton | 33.30 | 37.20 | 40.76 | 41.76 | 42.16 | 42.16 | 43.06 | 43.06 | 43.06 | 43.06 | 43.06 | 43.06 | 42.81 |
|  | Cincinnati | 42.58 | 40.30 | 41.30 | 49.12 | 50.22 | 49.57 | 49.75 | 49.75 | 50.12 | 50.12 | 50.12 | 51.52 | 51.33 |
|  | Cleveland | 33.30 | 37.20 | 40.76 | 41.76 | 42.16 | 42.16 | 43.06 | 43.06 | 43.06 | 43.06 | 43.06 | 43.06 | 41.81 |

Appendix 4
Local Rates: 1983-1995

|  |  | Single Line Business Touch-Tone Access Line <br> Subscriber Line Charges. Rates are for unlimited calling where offered, easured service with 200 five minute calls elsewhere. Rates exclude taxes. |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Excluding Surcharges |  |  | Including Including Surcharges |  |  |  |  |  |  |  |  |  |
|  |  | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| OH | Columbus | \$33.30 | \$37.20 | \$40.76 | \$41.76 | \$42.16 | \$42.16 | \$43.06 | \$43.06 | \$43.06 | \$43.06 | \$43.06 | \$43.06 | \$41.81 |
|  | Toledo | 33.30 | 37.20 | 40.76 | 41.76 | 42.16 | 42.16 | 43.06 | 43.06 | 43.06 | 43.06 | 43.06 | 43.06 | 42.81 |
| OR | Corvallis | 35.65 | 40.06 | 41.06 | 44.06 | 41.46 | 41.46 | 41.34 | 41.70 | 43.37 | 36.57 | 36.57 | 36.57 | 35.02 |
|  | Portland | 39.40 | 41.98 | 42.98 | 45.98 | 43.38 | 43.50 | 43.38 | 43.38 | 44.68 | 39.29 | 39.29 | 39.29 | 37.34 |
| PA | Allentown | 20.10 | 28.75 | 33.51 | 34.51 | 35.11 | 35.11 | 32.75 | 32.60 | 32.60 | 32.60 | 32.60 | 32.80 | 32.80 |
|  | Ellwood City | 17.36 | 27.75 | 31.86 | 32.86 | 33.46 | 33.46 | 35.17 | 35.05 | 35.05 | 35.05 | 35.05 | 33.30 | 33.30 |
|  | Johnstown | 26.38 | 26.38 | 29.16 | 32.20 | 32.80 | 32.80 | 33.80 | 33.77 | 35.00 | 34.39 | 36.23 | 33.12 | 32.87 |
|  | New Castle | 17.36 | 27.75 | 31.86 | 32.86 | 33.46 | 33.46 | 35.17 | 35.05 | 35.05 | 35.05 | 35.05 | 35.40 | 35.40 |
|  | Philadelphia | 19.51 | 21.75 | 24.81 | 25.81 | 26.41 | 26.41 | 27.89 | 27.75 | 27.75 | 27.75 | 27.75 | 27.90 | 27.90 |
|  | Pittsburgh | 19.51 | 21.75 | 24.81 | 25.81 | 26.41 | 26.41 | 27.89 | 27.75 | 27.75 | 27.75 | 27.75 | 27.90 | 27.90 |
|  | Scranton | 18.74 | 28.75 | 33.51 | 34.51 | 35.11 | 35.11 | 36.88 | 32.60 | 32.60 | 32.60 | 32.60 | 32.80 | 32.80 |
| RI | Providence | 35.60 | 35.60 | 39.48 | 39.03 | 39.75 | 39.75 | 40.65 | 40.65 | 40.57 | 43.95 | 43.95 | 43.41 | 39.01 |
| SC | Beaufort | 24.95 | 24.95 | 25.95 | 26.95 | 27.40 | 33.25 | 34.15 | 34.15 | 35.77 | 35.77 | 35.77 | 35.77 | 35.17 |
| TN | Memphis | 41.60 | 43.50 | 44.70 | 45.70 | 46.30 | 46.30 | 46.55 | 46.20 | 48.51 | 48.51 | 48.51 | 48.51 | 48.51 |
|  | Nashville | 40.95 | 42.85 | 44.05 | 45.05 | 45.65 | 45.65 | 46.55 | 46.20 | 46.20 | 46.20 | 46.20 | 46.20 | 46.20 |
| TX | Brownsville | 21.90 | 22.65 | 23.65 | 24.65 | 25.25 | 25.25 | 26.15 | 26.15 | 25.90 | 25.90 | 25.90 | 25.45 | 25.45 |
|  | Corpus Christi | 22.55 | 23.30 | 24.30 | 25.30 | 25.90 | 25.90 | 26.80 | 26.80 | 26.55 | 26.55 | 26.55 | 26.10 | 26.10 |
|  | Dallas | 26.50 | 27.25 | 28.25 | 29.25 | 29.85 | 29.85 | 30.75 | 30.75 | 30.50 | 30.50 | 30.50 | 30.05 | 30.05 |
|  | Fort Worth | 24.35 | 25.10 | 26.10 | 27.10 | 27.70 | 27.70 | 28.60 | 28.60 | 28.35 | 28.35 | 28.35 | 27.90 | 27.90 |
|  | Houston | 29.50 | 30.25 | 31.25 | 32.25 | 32.85 | 32.85 | 33.75 | 33.75 | 33.50 | 33.50 | 33.50 | 33.05 | 33.05 |
|  | San Antonio | 24.35 | 25.10 | 26.10 | 27.10 | 27.70 | 27.70 | 28.60 | 28.60 | 28.35 | 28.35 | 28.35 | 27.90 | 27.90 |
| UT | Logan | 23.51 | 30.83 | 32.16 | 36.79 | 37.39 | 35.24 | 34.90 | 32.54 | 28.71 | 28.71 | 28.71 | 28.71 | 28.75 |
| VA | Richmond | 38.49 | 53.93 | 54.93 | 55.93 | 56.03 | 55.53 | 55.43 | 54.68 | 54.68 | 54.68 | 56.54 | 56.54 | 56.54 |
|  | Smithfield | 16.75 | 22.36 | 23.36 | 24.36 | 24.96 | 24.96 | 25.61 | 25.61 | 25.46 | 25.46 | 25.46 | 25.46 | 25.46 |
| WA | Everett | 37.23 | 37.23 | 37.97 | 41.41 | 41.43 | 41.43 | 42.33 | 42.33 | 41.83 | 41.83 | 35.15 | 35.15 | 35.15 |
|  | Seattle | 38.05 | 38.44 | 39.44 | 38.40 | 38.70 | 38.20 | 39.10 | 34.92 | 34.19 | 34.01 | 34.90 | 32.66 | 32.66 |
| WV | Huntington | 47.77 | 54.52 | 61.73 | 62.73 | 63.33 | 63.33 | 66.25 | 66.25 | 66.25 | 66.25 | 66.25 | 66.25 | 66.25 |
| WI | Milwaukee | 32.03 | 41.10 | 41.50 | 41.55 | 39.60 | 39.60 | 38.89 | 39.00 | 39.00 | 38.00 | 36.00 | 34.35 | 34.35 |
|  | Racine | 31.23 | 40.30 | 40.70 | 40.75 | 39.60 | 39.60 | 38.89 | 39.00 | 39.00 | 38.00 | 36.00 | 36.00 | 36.00 |

Appendix 4 Local Rates: 1983-1995

Connection of a Touch-Tone Business Line
Rates do not include additional charges, if any, for drop line and connection block.
Rates exclude taxes.

|  |  | Excluding Surcharges |  |  | Including Surcharges |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| AL | Huntsville | \$74.25 | \$90.50 | \$90.50 | \$90.50 | \$90.50 | \$90.50 | \$90.50 | \$90.50 | \$90.50 | \$69.00 | \$69.00 | \$69.00 | \$69.00 |
| AK | Anchorage | 34.25 | 34.25 | 34.25 | 34.25 | 34.25 | 34.25 | 34.25 | 34.25 | 34.25 | 34.25 | 34.25 | 30.75 | 30.75 |
| AZ | Tuscon | 106.50 | 106.50 | 106.50 | 46.50 | 46.50 | 63.00 | 63.12 | 63.12 | 56.11 | 56.11 | 56.11 | 56.11 | 56.11 |
| AR | West Memphis | 48.05 | 48.05 | 84.00 | 84.00 | 84.00 | 84.00 | 84.00 | 92.00 | 92.00 | 92.00 | 92.00 | 84.00 | 84.00 |
|  | Pine Bluff | 48.05 | 48.05 | 84.00 | 84.00 | 84.00 | 84.00 | 84.00 | 92.00 | 92.00 | 92.00 | 92.00 | 84.00 | 84.00 |
| CA | Anaheim | 39.75 | 75.00 | 75.00 | 75.00 | 75.00 | 75.75 | 75.75 | 75.75 | 70.42 | 69.83 | 69.46 | 69.12 | 68.95 |
|  | Bakersfield | 39.75 | 75.00 | 75.00 | 75.00 | 75.00 | 75.75 | 75.75 | 75.75 | 70.42 | 69.83 | 69.46 | 69.12 | 68.95 |
|  | Fresno | 39.75 | 75.00 | 75.00 | 75.00 | 75.00 | 75.75 | 75.75 | 75.75 | 70.42 | 69.83 | 69.46 | 69.12 | 68.95 |
|  | Long Beach | 41.00 | 60.75 | 60.75 | 60.75 | 60.75 | 60.75 | 60.83 | 74.30 | 83.08 | 83.78 | 83.78 | 80.20 | 84.33 |
|  | Los Angeles | 39.75 | 75.00 | 75.00 | 75.00 | 75.00 | 75.75 | 75.75 | 75.75 | 70.42 | 69.83 | 69.46 | 69.12 | 68.95 |
|  | Oakland | 39.75 | 75.00 | 75.00 | 75.00 | 75.00 | 75.75 | 75.75 | 75.75 | 70.42 | 69.83 | 69.46 | 69.12 | 68.95 |
|  | Salinas | 39.75 | 75.00 | 75.00 | 75.00 | 75.00 | 75.75 | 75.75 | 75.75 | 70.42 | 69.83 | 69.46 | 69.12 | 68.95 |
|  | San Bernadino | 41.00 | 60.75 | 60.75 | 60.75 | 60.75 | 60.75 | 60.83 | 74.30 | 83.08 | 83.78 | 83.78 | 80.20 | 84.33 |
|  | San Diego | 39.75 | 75.00 | 75.00 | 75.00 | 75.00 | 75.75 | 75.75 | 75.75 | 70.42 | 69.83 | 69.46 | 69.12 | 68.95 |
|  | San Francisco | 39.75 | 75.00 | 75.00 | 75.00 | 75.00 | 75.75 | 75.75 | 75.75 | 70.42 | 69.83 | 69.46 | 69.12 | 68.95 |
|  | San Jose | 39.75 | 75.00 | 75.00 | 75.00 | 75.00 | 75.75 | 75.75 | 75.75 | 70.42 | 69.83 | 69.46 | 69.12 | 68.95 |
| CO | Boulder | 92.70 | 92.70 | 92.70 | 92.70 | 85.00 | 85.00 | 85.00 | 85.00 | 70.00 | 70.00 | 70.00 | 70.00 | 70.00 |
|  | Col. Springs | 92.70 | 92.70 | 92.70 | 92.70 | 85.00 | 85.00 | 85.00 | 85.00 | 70.00 | 70.00 | 70.00 | 70.00 | 70.00 |
|  | Denver | 92.70 | 92.70 | 92.70 | 92.70 | 85.00 | 85.00 | 85.00 | 85.00 | 70.00 | 70.00 | 70.00 | 70.00 | 70.00 |
| CT | Ansonia | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 65.00 | 65.00 | 65.00 |
|  | Norwalk | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 65.00 | 65.00 | 65.00 |
| DC | Washington | 25.00 | 69.00 | 69.00 | 69.00 | 67.76 | 66.03 | 70.57 | 70.16 | 71.09 | 66.03 | 66.03 | 66.03 | 66.03 |
| FL | Miami | 54.50 | 54.50 | 54.50 | 54.50 | 54.50 | 54.50 | 54.57 | 54.57 | 54.50 | 54.50 | 54.50 | 56.00 | 56.00 |
|  | Tampa | 58.90 | 58.90 | 58.90 | 58.90 | 58.90 | 58.90 | 58.90 | 58.90 | 58.90 | 58.90 | 73.90 | 68.90 | 68.90 |
|  | W. Palm Beach | 54.50 | 54.50 | 54.50 | 54.50 | 54.50 | 54.50 | 54.57 | 54.57 | 54.50 | 54.50 | 54.50 | 56.00 | 56.00 |
| GA | Albany | 50.25 | 50.25 | 52.25 | 52.25 | 52.25 | 52.25 | 52.25 | 52.25 | 52.25 | 52.25 | 52.25 | 52.25 | 52.25 |
|  | Atlanta | 50.25 | 50.25 | 52.25 | 52.25 | 52.25 | 52.25 | 52.25 | 52.25 | 52.25 | 52.25 | 52.25 | 52.25 | 52.25 |
| HI | Honolulu | 27.00 | 51.00 | 60.00 | 45.50 | 45.50 | 47.50 | 30.50 | 45.50 | 47.50 | 47.50 | 47.50 | 47.50 | 47.50 |
| IL | Chicago | 43.00 | 45.55 | 70.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 52.35 |
|  | Decatur | 43.00 | 45.55 | 70.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 52.35 |
|  | Rock Island | 43.00 | 45.55 | 70.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 84.50 | 52.35 |
| IN | Indianapolis | 55.00 | 55.00 | 55.00 | 63.00 | 63.00 | 59.00 | 59.00 | 59.00 | 59.00 | 59.00 | 59.00 | 59.00 | 59.00 |
|  | Terre Haute | 36.40 | 36.40 | 36.40 | 36.40 | 36.40 | 65.40 | 65.40 | 65.40 | 65.50 | 65.50 | 65.50 | 65.50 | 65.50 |
| IA | Fort Dodge | 52.95 | 52.95 | 52.95 | 52.95 | 49.90 | 24.95 | 24.95 | 24.95 | 14.90 | 14.90 | 14.90 | 14.90 | 14.90 |
| KY | Louisville | 56.75 | 72.50 | 47.50 | 47.50 | 47.50 | 47.50 | 47.50 | 47.50 | 47.50 | 47.50 | 47.50 | 47.50 | 47.50 |
| LA | Baton Rouge | 42.50 | 89.00 | 89.00 | 89.00 | 89.00 | 92.99 | 92.99 | 87.77 | 87.77 | 87.77 | 85.00 | 85.00 | 85.00 |
|  | New Orleans | 42.50 | 89.00 | 89.00 | 89.00 | 89.00 | 92.99 | 92.99 | 87.77 | 87.77 | 87.77 | 85.00 | 85.00 | 85.00 |
| ME | Portland | 53.75 | 60.75 | 56.00 | 56.00 | 56.00 | 56.00 | 56.00 | 56.00 | 56.00 | 56.00 | 56.00 | 56.00 | 56.00 |
| MD | Baltimore | 40.17 | 57.00 | 70.00 | 70.00 | 70.00 | 70.00 | 70.00 | 70.00 | 70.00 | 70.00 | 98.50 | 98.50 | 98.50 |
| MA | Boston | 44.75 | 44.75 | 44.75 | 44.75 | 43.41 | 43.41 | 43.41 | 43.41 | 88.89 | 93.02 | 93.02 | 93.02 | 93.02 |
|  | Hyannis | 44.75 | 44.75 | 44.75 | 44.75 | 43.41 | 43.41 | 43.41 | 43.41 | 88.89 | 93.02 | 93.02 | 93.02 | 93.02 |
|  | Springfield | 44.75 | 44.75 | 44.75 | 44.75 | 43.41 | 43.41 | 43.41 | 43.41 | 88.89 | 93.02 | 93.02 | 93.02 | 93.02 |
| MI | Detroit | 22.90 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 |
|  | Grand Rapids | 22.90 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 |
|  | Saginaw | 22.90 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 | 42.00 |
| MN | Detroit Lakes | 34.00 | 34.00 | 34.00 | 34.00 | 34.00 | 34.00 | 34.00 | 34.00 | 34.00 | 47.50 | 47.50 | 49.50 | 49.50 |
|  | Minneapolis | 34.00 | 34.00 | 34.00 | 34.00 | 34.00 | 34.00 | 34.00 | 34.00 | 34.00 | 47.50 | 47.50 | 49.50 | 49.50 |
| MS | Pascagoula | 45.00 | 90.50 | 90.50 | 75.50 | 72.50 | 72.50 | 72.50 | 72.50 | 72.50 | 72.50 | 67.00 | 67.00 | 67.00 |
| MO | Kansas City | 26.90 | 62.50 | 62.50 | 84.25 | 84.28 | 84.25 | 52.25 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 52.25 |
|  | Mexico | 26.90 | 62.50 | 62.50 | 84.25 | 84.28 | 84.25 | 52.25 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 52.25 |
|  | St. Louis | 26.90 | 62.50 | 62.50 | 84.25 | 84.28 | 84.25 | 52.25 | 60.00 | 60.00 | 60.00 | 60.00 | 60.00 | 52.25 |
| MT | Butte | 43.75 | 58.50 | 76.45 | 86.35 | 86.35 | 71.00 | 71.00 | 64.40 | 64.40 | 64.40 | 61.40 | 61.40 | 61.40 |
| NE | Grand Island | 32.00 | 36.15 | 36.15 | 40.25 | 40.25 | 40.25 | 66.00 | 66.00 | 66.00 | 66.00 | 66.00 | 45.00 | 45.00 |
| NJ | Phillipsburg | 54.00 | 66.00 | 79.50 | 79.50 | 79.50 | 79.50 | 79.50 | 79.50 | 79.50 | 79.50 | 79.50 | 79.50 | 79.50 |
| NM | Alamogordo | 36.60 | 63.00 | 63.00 | 77.00 | 77.00 | 77.00 | 70.00 | 70.00 | 60.95 | 60.95 | 60.95 | 53.95 | 53.95 |
| NY | Binghamton | 99.25 | 116.75 | 116.75 | 123.15 | 123.15 | 123.15 | 132.99 | 136.81 | 137.04 | 135.64 | 123.21 | 112.49 | 111.96 |
|  | Buffalo | 99.25 | 116.75 | 116.75 | 123.15 | 123.15 | 123.15 | 134.24 | 138.06 | 139.45 | 138.05 | 125.40 | 114.49 | 113.96 |
|  | Massena | 99.25 | 116.75 | 116.75 | 123.15 | 123.15 | 123.15 | 133.43 | 137.25 | 137.50 | 136.09 | 123.63 | 112.87 | 112.34 |
|  | New York City | 99.25 | 116.75 | 116.75 | 123.15 | 123.15 | 123.15 | 135.83 | 139.64 | 139.98 | 138.70 | 126.00 | 115.04 | 114.51 |
|  | Ogdensburg | 99.25 | 116.75 | 116.75 | 123.15 | 123.15 | 123.15 | 133.44 | 137.26 | 137.51 | 136.10 | 123.64 | 112.88 | 112.35 |
|  | Rochester | 52.75 | 52.75 | 52.75 | 54.00 | 54.00 | 34.00 | 35.33 | 35.33 | 55.71 | 55.29 | 53.96 | 52.93 | 52.93 |
| NC | Raleigh | 61.50 | 70.25 | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 |
|  | Rockingham | 61.50 | 70.25 | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 | 62.50 |
| OH | Canton | 79.00 | 58.65 | 58.65 | 58.65 | 58.65 | 58.65 | 81.45 | 72.15 | 72.15 | 72.15 | 72.15 | 72.15 | 62.85 |
|  | Cincinnati | 44.55 | 44.55 | 44.55 | 54.00 | 54.00 | 54.00 | 54.00 | 54.00 | 54.00 | 54.00 | 54.00 | 55.78 | 55.78 |
|  | Cleveland | 79.00 | 58.65 | 58.65 | 58.65 | 58.65 | 58.65 | 81.45 | 72.15 | 72.15 | 72.15 | 72.15 | 72.15 | 62.85 |

Appendix 4 Local Rates: 1983-1995

|  |  | Connection of a Touch-Tone Business Line <br> Rates do not include additional charges, if any, for drop line and connection block. Rates exclude taxes. |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Excluding Surcharges |  |  | Including Surcharges |  |  |  |  |  |  |  |  |  |
|  |  | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
| OH | Columbus | \$79.00 | \$58.65 | \$58.65 | \$58.65 | \$58.65 | \$58.65 | \$81.45 | \$72.15 | \$72.15 | \$72.15 | \$72.15 | \$72.15 | \$62.85 |
|  | Toledo | 79.00 | 58.65 | 58.65 | 58.65 | 58.65 | 58.65 | 81.45 | 72.15 | 72.15 | 72.15 | 72.15 | 72.15 | 62.85 |
| OR | Corvallis | 46.00 | 46.00 | 48.00 | 48.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 |
|  | Portland | 46.00 | 46.00 | 48.00 | 48.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 | 31.00 |
| PA | Allentown | 74.50 | 82.00 | 82.00 | 82.00 | 82.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
|  | Ellwood City | 74.50 | 82.00 | 82.00 | 82.00 | 82.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
|  | Johnstown | 50.95 | 50.95 | 50.95 | 61.50 | 61.50 | 61.50 | 61.69 | 59.81 | 61.99 | 56.56 | 56.56 | 57.10 | 57.02 |
|  | New Castle | 74.50 | 82.00 | 82.00 | 82.00 | 82.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
|  | Philadelphia | 74.50 | 82.00 | 82.00 | 82.00 | 82.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
|  | Pittsburgh | 74.50 | 82.00 | 82.00 | 82.00 | 82.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
|  | Scranton | 74.50 | 82.00 | 82.00 | 82.00 | 82.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| RI | Providence | 29.00 | 29.00 | 37.45 | 37.45 | 37.45 | 37.45 | 37.45 | 37.45 | 37.45 | 37.45 | 37.45 | 44.61 | 44.61 |
| SC | Beaufort | 29.50 | 29.50 | 29.50 | 29.50 | 29.50 | 35.60 | 35.60 | 35.60 | 35.60 | 35.60 | 35.60 | 35.60 | 35.60 |
| TN | Memphis | 53.20 | 64.80 | 58.50 | 58.50 | 58.60 | 58.50 | 58.50 | 58.50 | 61.43 | 61.43 | 61.43 | 61.43 | 61.43 |
|  | Nashville | 53.20 | 64.80 | 58.50 | 58.50 | 58.60 | 58.50 | 58.50 | 58.50 | 58.50 | 58.50 | 58.50 | 58.50 | 58.50 |
| TX | Brownsville | 69.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 62.05 | 62.05 | 62.05 | 59.65 | 59.65 |
|  | Corpus Christi | 69.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 62.05 | 62.05 | 62.05 | 59.65 | 59.65 |
|  | Dallas | 69.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 62.05 | 62.05 | 62.05 | 59.65 | 59.65 |
|  | Fort Worth | 69.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 62.05 | 62.05 | 62.05 | 59.65 | 59.65 |
|  | Houston | 69.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 62.05 | 62.05 | 62.05 | 59.65 | 59.65 |
|  | San Antonio | 69.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 65.00 | 62.05 | 62.05 | 62.05 | 59.65 | 59.65 |
| UT | Logan | 42.60 | 52.00 | 76.50 | 76.50 | 76.50 | 76.50 | 76.50 | 66.50 | 50.00 | 50.00 | 50.00 | 50.00 | 50.00 |
| VA | Richmond | 42.44 | 64.00 | 64.00 | 64.00 | 64.00 | 64.00 | 64.00 | 64.00 | 64.00 | 64.00 | 64.00 | 64.00 | 64.00 |
|  | Smithfield | 13.00 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 |
| WA | Everett | 54.00 | 54.00 | 53.00 | 53.00 | 53.00 | 53.00 | 53.00 | 53.00 | 39.00 | 39.00 | 39.00 | 53.00 | 53.00 |
|  | Seattle | 43.00 | 43.00 | 48.00 | 48.00 | 48.00 | 48.00 | 48.00 | 52.06 | 51.78 | 51.50 | 51.23 | 51.06 | 51.06 |
| WV | Huntington | 95.55 | 95.55 | 96.90 | 96.90 | 96.90 | 96.90 | 96.90 | 96.90 | 96.90 | 96.90 | 96.90 | 96.90 | 96.90 |
| WI | Milwaukee | 44.65 | 44.65 | 44.65 | 44.65 | 44.65 | 64.65 | 64.65 | 64.65 | 64.65 | 64.65 | 64.65 | 64.65 | 64.65 |
|  | Racine | 44.65 | 44.65 | 44.65 | 44.65 | 44.65 | 64.65 | 64.65 | 64.65 | 64.65 | 64.65 | 64.65 | 64.65 | 64.65 |

## ApPENDIX 5 Local Service Rate Averages by Company

This appendix compares data in the Statistics of Communications Common Carriers (SOCC), Federal Communications Commission, 1993/1994, 1994/1995, and 1995/1996 with the rate averages from the Industry Analysis Division's Urban Rates Survey. Because the Urban Rates Survey does not include rural areas where rates tend to be lower, the survey shows somewhat higher rates than would be calculated if rural areas were included. Similarly, the Urban Rates Survey residential average is based on single party unlimited flat rate service and does not reflect lower rates paid by many households. In addition, the revenue based figures represent totals, while the survey data represents rate averages as of October 15. Given these differences in definition, the survey averages are as consistent with the data in the SOCC as can be expected.

The largest local exchange carriers (LECs) -- those having regulated telecommunications revenues exceeding $\$ 100$ million per year -- report annual revenues using the account structure prescribed by the Uniform System of Accounts (USOA), part 32 of the FCC rules. These companies provide plant, expense, and revenue account data, along with various operating statistics, in their annual Automated Regulatory Management Information System (ARMIS) filings. The data are summarized and published in the SOCC.

The first block of figures in Tables A5:1-3 show estimates of the average number of access lines. The estimates are based on the year end figures for access lines in 1993, 1994, and 1995, provided in SOCC Table 2-10. Generally, the RBOCs report that about $10 \%$ of business access lines are for single-line customers, while $90 \%$ are for multiline customers. These percentages were used to divide total business access lines into single and multi-line counts for carriers whose breakdowns did not appear to be reliable. The total end user access lines shown in the A5 tables do not include digital access lines, special access lines, or access lines used for LEC pay telephones, but do include WATS and 800 service lines. Reporting carriers, which provide about 92\% of the pre-subscribed lines, had about 140.3 million end user access lines during 1995, of which about $68.6 \%$ were used by residential customers.

The second block of figures in Tables A5:1-3 contain summaries of revenue and plant accounts. Basic area revenue is reported in account \#5001, and includes revenue derived from the provision of basic area message services such as flat rate services and measured services. The account includes local area message charges, but excludes toll charges. The account also includes amounts paid by businesses so that the telephone company will place a semi-public pay telephone on the business's premise. Actual coin revenues are reported in Account \#5010 and are not shown separately in Tables A5:1-3.

Revenues from federal subscriber line charges are reported in Account \# 5081 -End user revenues. A small amount of state subscriber line charges are included in Account \#5084 -- State access revenues. The sum of basic area revenues and end user revenues is identified in Tables A5:1-3 as "Primary Access Service" revenues, and approximates the revenues carriers receive for providing basic local service.

Tables A5:1-3 show other local exchange revenues, which are the revenues reported in Account \#5060. That account includes revenue from the provision of secondary features such as touch-tone line service, call forwarding, call waiting and caller identification services. The account includes provision of public announcement, directory assistance and non-toll call completion services. The account also includes central office related service connection and termination charges and other non-premise customer specific charges associate with public network services.

Tables A5:1-3 also show a category titled "Toll Related" revenues. This summarizes toll revenues and access revenues other than end user charges. The category "Toll" summarizes message toll service and unidirectional service revenues such as WATS and 800 service. The other network access revenues include Accounts \#5082 -- Switched access revenue; \#5083 -- Special Access Revenue; and \#5084 -- state access revenues. Taken together, these accounts approximate the revenues that local exchange carriers derive from toll customers using the public switched network.

Tables A5:1-3 sum primary access service, other local exchange, and toll related revenues in a category labeled "Basic Network Revenues". Basic network revenues represented 84.5\% of Total Operating Revenues in 1995.

The third block of figures in Tables A5:1-3 show several categories of revenue on a per access line per month basis. The average number of access lines shown in Table A5-1 include dedicated WATS and 800 lines. Revenue from these customers are not included in primary access service or other local exchange revenue accounts. The average number of business access lines was reduced by $5 \%$ for calculating primary access service revenue per line, and other local exchange revenue per line. Toll revenues include WATS and 800 service revenues, so the line counts were not adjusted for calculating toll related revenue per access line.

In 1995, Tier 1 telephone companies collected an average of $\$ 23.20$ per month for each access line for providing primary access service -- that is, basic local service and access to the toll network. This represented an increase over the $\$ 21.98$ per month collected in 1994, and the $\$ 20.62$ per month collected in 1990 . The carriers collected an average of $\$ 5.56$ per month per line for other local services such as touch-tone, call forwarding, and connection charges. Toll service revenues and related network access charges account for $40 \%$ of LEC revenues. Taken together, these toll related revenues amount to $\$ 19.21$ per access line per month.

The fourth block in Tables A5:1-3 shows the October average rates for basic service and subscriber line charges. The figures in the table include surcharges that are accounted for as revenue, but exclude taxes. Touch-tone charges are shown separately. The residential rate is for unlimited service, or measured service with 100 five minute calls if unlimited service is not offered. The business rates are for unlimited service, or measured service with 200 five minute calls if unlimited service is not offered.

The fourth block in Tables A5:1-3 also shows weighted averages of residential and business rates for basic service and additional charges for touch-tone service. Rates were weighted in proportion to 1995 access lines, with business lines reduced by $5 \%$ to reflect WATS and 800 lines. The weighted average basic service rate should be roughly comparable to the primary access service revenue per month per line described above.

As of October 1995 the local service and subscriber line charges for an access line averaged $\$ 23.81$ for the 95 cities in the sample. This figure exceeds the revenue per line estimate by $\$ 0.61$ per month. Several factors may account for this difference. The survey is drawn from urban areas. Almost $20 \%$ of the population lives in rural areas, and more than three quarters of all rural customers are served by the reporting carriers. Most carriers charge lower basic rates in rural areas. Thus, the weighted average reflects an average of urban rates, and is higher than it would be if rural areas had been included in the sample design. Another bias results from using December 31 line counts, since lines have been changing through out the year, this lowers the calculated revenue per line estimates.

The Urban Rates Survey also reflects the assumption that all residential customers take single party unlimited service where offered. Lower rate service options are available in most areas, and some customers use these services.

At one time some carriers included company official or internally used lines in the access line totals reported to the FCC. The carriers have been instructed to exclude these lines. The revenue per line estimates would be artificially low to the extent that company official lines were included in the access line counts.

For some companies, the usage assumptions underlying the rate averages may account for some of the difference between rate averages and revenues per line. The rate averages were calculated using unlimited service. If measured service was not offered in a city, the measured service rate plus a fixed number of calls was used to calculate an equivalent to the unlimited service rate. In 1995, residential customers in Wisconsin, New York City, and Chicago, had to take measured service. The local rate in those cities was calculated as the measured service rate plus 100 five minute calls. The nationwide averages are not very sensitive to the choice of 100 five minute calls because telephone companies offered unlimited service in the remaining 91 cities. However, the NYNEX and Ameritech rate averages would change if a different number of messages were used to calculate the equivalent to unlimited service rates. The rate averages are less than the revenue averages for these RBOCs, suggesting that
measured rate customers probably average more calling than the assumption. The 100 call assumption has been retained so that rate averages are consistent with averages published for prior years.

A much greater percentage of business customers are required to take measured service. Business customers in 42 of the sample cities were required to take measured service. The representative rate was calculated using the measured service rate in these 42 cities plus the cost of 200 five minute calls. The Pacific Telesis rate average would have been almost $\$ 3$ lower if 125 calls had been used instead of 200 calls. The 200 call assumption is probably high in states like California and New Jersey, which have relatively small local calling areas. The 200 call assumption is probably low in some other areas.

Tables A5:1-3 show that carriers collected an average of $\$ 5.56$ per month per access line for other local exchange services. Weighted by access lines, the average touch-tone charge was $\$ 0.66$ per access line in 1995. However, some customers continue to take rotary service. Connection charges are another significant component of account \#5060. While connection charges average more than $\$ 40$ per line, only $10 \%$ to $20 \%$ of access lines are connected each year. Connection charges probably represented about $\$ .50$ of the $\$ 5.56$ per month per access line recorded for other local exchange services. Other optional services, such as call forwarding and caller identification, probably accounted for about $\$ 4.00$ in revenue per month per access line, and represent about $6 \%$ of total operating revenue.

In addition to providing nationwide figures, Tables A5:1-3 show data for the seven Regional Bell Operating Companies (RBOCs) and for "Other reporting" carriers. The other reporting carriers include Cincinnati Bell, Southern New England Telephone, AllTel, Central Telephone, Citizens, Commonwealth, Contel, GTE, Lincoln, Puerto Rico Telephone, Rochester Telephone, and United. Table 2.3 in the SOCC shows that the RBOCs provided about 76.8\% of the presubscribed access lines in the United States in 1995. The other reporting carriers provided about $15.8 \%$ of the presubscribed access lines. The non-reporting carriers provided about $7.4 \%$ of presubscribed access lines, primarily in rural areas.

The rate averages by company presented in Tables A5:1-3 are not as reliable as the nationwide average estimates. The Regional Bell Operating Company (RBOC) samples range from 9 to 13 cities, and each LEC represents between $9 \%$ and $17 \%$ of the overall sample weight. The independent carriers are represented by 15 sample cities, providing $12 \%$ of the sample weight. These are very small samples, so the averages presented in the table should be used cautiously.

Figure 34 shows revenues per access line and average local rate levels by company. This graph shows agreement between the revenues and rate averages by company. The largest differences are for NYNEX and BellSouth. BellSouth has relatively high flat rate charges for business customers. It is possible that many low usage

Figure 34


Figure 35
Basic Network Revenues per Access Line, 1995
 business customers reduced their bills by substituting measured service. BellSouth may also have a high proportion of lines in lower rated rural areas. As noted above, business customers in California are required to take measured service. Because of the relatively small local calling areas, California customers probably average less than the 200 calls per month used in estimating the average rate level. Customers of NYNEX are also required to take measured service, however in their case 200 calls may be a low estimate.

Figure 34 shows that companies have widely varying local rate levels. These differences are not a good indicator of overall differences in cost. Because of differences in toll rates and toll usage patterns, some carriers have significantly higher toll related revenues than other carriers. Figure 35 shows monthly revenues per access line for basic area service, other local exchange services, and toll related categories. The total represents basic network service revenues. The graph shows that there is less disparity in overall basic network service revenues than there are for any of the components. Thus, low local service rates may reflect the availability of toll revenue to cover a greater share of total cost.

Table A5-1
Selected Data by Local Exchange Telephone Company - 1993

|  | Ameritech | Bell Atlantic | BellSouth | NYNEX | Pacific Bell | SBC | U.S. West | Independents | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Estimated average level of access lines 1993 * |  |  |  |  |  |  |  |  |  |
| Residential | 11,499,283 | 11,917,720 | 13,494,768 | 10,773,454 | 9,400,440 | 8,899,897 | 9,625,182 | 18,758,976 | 94,369,719 |
| Single-Line Business | 497,992 | 403,384 | 557,066 | 459,275 | 588,548 | 335,179 | 358,291 | 1,579,742 | 4,779,475 |
| Multi-Line Business | 4,481,927 | 5,257,367 | 3,621,740 | 4,133,474 | 5,296,932 | 3,283,284 | 3,224,615 | 4,438,811 | 33,738,148 |
| Total end user lines | 16,479,202 | 17,578,470 | 17,673,573 | 15,366,202 | 15,285,920 | 12,518,360 | 13,208,087 | 24,777,528 | 132,887,342 |
| Revenues and Plant reported for 1993 in \$000 ** |  |  |  |  |  |  |  |  |  |
| Basic area | \$3,765,949 | \$3,467,904 | \$3,960,261 | \$4,671,705 | \$1,962,023 | \$2,689,455 | \$3,134,351 | \$5,173,836 | \$28,825,484 |
| End user | \$746,406 | \$825,130 | \$904,006 | \$909,691 | \$635,411 | \$598,444 | \$625,006 | \$1,157,647 | \$6,401,741 |
| Primary Access Service (1) | \$4,512,355 | \$4,293,034 | \$4,864,267 | \$5,581,396 | \$2,597,434 | \$3,287,899 | \$3,759,357 | \$6,331,483 | \$35,227,225 |
| Other local exchange (2) | \$817,724 | \$962,479 | \$1,689,951 | \$1,316,509 | \$830,331 | \$856,988 | \$570,434 | \$1,327,235 | \$8,371,651 |
| Toll | \$1,221,594 | \$1,421,610 | \$1,051,440 | \$929,597 | \$2,099,445 | \$935,096 | \$1,432,650 | \$2,906,895 | \$11,998,327 |
| Other Network Access | \$1,990,993 | \$2,294,912 | \$2,986,368 | \$2,479,609 | \$1,678,097 | \$2,087,002 | \$2,227,757 | \$5,133,457 | \$20,878,195 |
| Toll Related (3) | \$3,212,587 | \$3,716,522 | \$4,037,808 | \$3,409,206 | \$3,777,542 | \$3,022,098 | \$3,660,407 | \$8,040,352 | \$32,876,522 |
| Basic Network Revenues |  |  |  |  |  |  |  |  |  |
| $(1)+(2)+(3)$ | \$8,542,666 | \$8,972,035 | \$10,592,026 | \$10,307,111 | \$7,205,307 | \$7,166,985 | \$7,990,198 | \$15,699,070 | \$76,475,398 |
| Other Local | \$478,613 | \$640,872 | \$1,002,327 | \$531,645 | \$723,854 | \$372,434 | \$153,148 | \$583,003 | \$4,485,896 |
| Private Line and Other Toll | \$179,948 | \$136,429 | \$168,075 | \$210,530 | $(\$ 36,182)$ | \$91,215 | \$7,709 | \$278,399 | \$1,036,123 |
| Miscellaneous \& all other | \$910,044 | \$528,989 | \$1,166,438 | \$782,462 | \$246,829 | \$522,853 | \$491,439 | \$2,316,434 | \$6,965,488 |
| Total Operating Revenue | \$10,111,271 | \$10,278,325 | \$12,928,866 | \$11,831,748 | \$8,139,808 | \$8,153,487 | \$8,642,494 | \$18,876,906 | \$88,962,905 |
| Basic Network Revenue as <br> \% of Total Operating <br> $\begin{array}{llllllllll} & 84.5 \% & 87.3 \% & 81.9 \% & 87.1 \% & 88.5 \% & 87.9 \% & 92.5 \% & 83.2 \% & 86.0 \% \\ \text { Revenue } & \end{array}$ |  |  |  |  |  |  |  |  |  |
| Total Plant In Service | \$26,657,238 \$29,788,112 \$39,444,549 \$30,060,497 \$24,965,974 \$25,876,242 \$27,278,783 \$54,710,347 \$258,781,742 |  |  |  |  |  |  |  |  |
| Net Plant | \$15,863,674 \$18,998,012 \$23,105,268 \$17,309,135 \$14,991,604 \$15,204,554 \$17,221,014 \$33,686,791 \$156,380,052 |  |  |  |  |  |  |  |  |
| Basic network revenues per access line per month |  |  |  |  |  |  |  |  |  |
| Primary Access Service | \$22.82 | \$20.35 | \$22.94 | \$30.27 | \$14.16 | \$21.89 | \$23.72 | \$21.29 | \$22.09 |
| Other local exchange | \$4.14 | \$4.56 | \$7.97 | \$7.14 | \$4.53 | \$5.70 | \$3.60 | \$4.46 | \$5.25 |
| Toll related | \$16.25 | \$17.62 | \$19.04 | \$18.49 | \$20.59 | \$20.12 | \$23.09 | \$27.04 | \$20.62 |
| Basic Network Revenues | \$43.20 | \$42.53 | \$49.94 | \$55.90 | \$39.28 | \$47.71 | \$50.41 | \$52.80 | \$47.96 |
| Monthly rate for service including message charges and the Federal Subscriber Line charge. |  |  |  |  |  |  |  |  |  |
| Residential | \$15.99 | \$17.77 | \$17.62 | \$21.44 | \$11.63 | \$14.08 | \$17.49 | \$15.85 | \$16.77 |
| Single-Line Business | \$33.67 | \$34.44 | \$41.98 | \$43.19 | \$27.52 | \$30.05 | \$42.62 | \$34.11 | 36.27 |
| Multi-Line Business - Key | \$35.80 | \$35.21 | \$65.67 | \$45.39 | \$28.45 | \$38.58 | \$46.64 | \$43.54 | 42.55 |
| Multi-Line Business - PBX | \$37.02 | \$40.89 | \$68.93 | \$46.74 | \$32.28 | \$43.39 | \$51.85 | \$49.73 | 46.13 |
| Weighted Averages |  |  |  |  |  |  |  |  |  |
| For access line | \$21.86 | \$24.00 | \$28.15 | \$28.46 | \$18.51 | \$21.29 | \$25.61 | \$22.27 | 24.19 |
| Additional for touch-tone | \$1.68 | \$1.44 | \$1.61 | \$1.91 | \$0.00 | \$1.99 | \$0.40 | \$0.85 | 1.31 |
| Connection of a touch-tone line assuming that the drop line and connection block is already present |  |  |  |  |  |  |  |  |  |
| Residential | \$46.05 | \$40.35 | \$45.07 | \$54.14 | \$34.11 | \$39.47 | \$26.63 | \$41.14 | \$42.42 |
| First Business Line | \$67.64 | \$77.07 | \$62.65 | \$110.64 | \$69.46 | \$64.50 | \$54.19 | \$54.08 | \$72.58 |
| including hunting | \$33.82 | \$55.79 | \$24.78 | \$48.99 | \$113.63 | \$44.37 | \$61.23 | \$33.61 | \$50.15 |
| * Year end figures are provided in Table 2-10 of Statistics of Communications Common Carriers. The year average levels for residential lines are the average of the year end 1992 and the 1993 statistics. In general, the RBOC's have approximately $10 \%$ of their business lines going to single-line businesses, with the other $90 \%$ going to multi-line businesses. |  |  |  |  |  |  |  |  |  |
| ** The Revenue and Plant data are summarized from the 1992/93 Statistics of Communications Common Carriers. |  |  |  |  |  |  |  |  |  |

Table A5-2
Selected Data by Local Exchange Telephone Company - 1994

|  | Ameritech | Bell Atlantic | BellSouth | NYNEX | Pacific Bell | SBC | U.S. West | Independents | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Estimated average level of access lines 1994 |  |  |  |  |  |  |  |  |  |
| Residential | \$11,713,373 | \$12,122,878 | \$13,944,027 | \$10,985,036 | \$9,559,345 | \$9,106,038 | \$9,934,818 | \$19,546,437 | \$96,911,950 |
| Single-Line Business | \$682,433 | \$401,661 | \$558,229 | \$476,947 | \$567,962 | \$334,124 | \$374,857 | \$1,602,155 | \$4,211,749 |
| Multi-Line Business | \$6,141,895 | \$5,413,610 | \$3,855,356 | \$4,292,520 | \$5,111,662 | \$3,497,067 | \$3,373,710 | \$4,831,537 | \$37,905,739 |
| Total end user lines | \$18,537,701 | \$17,938,149 | \$18,357,612 | \$15,754,503 | \$15,238,970 \$ | \$12,937,229 | \$13,683,385 | \$25,980,128 | \$139,029,437 |
| Revenues and Plant reported for 1994 in \$000 ** |  |  |  |  |  |  |  |  |  |
| Basic area | \$3,925,943 | \$3,568,169 | \$4,119,245 | \$4,823,415 | \$2,146,889 | \$2,737,297 | \$3,242,367 | \$5,302,092 | \$29,865,417 |
| End user | \$807,124 | \$882,403 | \$950,842 | \$965,166 | \$653,782 | \$650,516 | \$679,829 | \$1,208,641 | \$6,798,303 |
| Primary Access Service (1) | \$4,733,067 | \$4,450,572 | \$5,070,087 | \$5,788,581 | \$2,800,671 | \$3,387,813 | \$3,922,196 | \$6,510,733 | \$36,663,720 |
| Other local exchange (2) | \$925,295 | \$1,028,747 | \$1,720,049 | \$1,304,971 | \$742,575 | \$850,463 | \$660,884 | \$1,490,906 | \$8,723,890 |
| Toll | \$1,265,035 | \$1,426,556 | \$1,011,532 | \$881,016 | \$2,110,726 | \$824,469 | \$1,318,907 | \$2,947,630 | \$11,785,871 |
| Other Network Access | \$2,014,154 | \$2,381,575 | \$3,202,321 | \$2,491,491 | \$1,753,190 | \$2,206,496 | \$2,290,873 | \$5,360,452 | \$21,700,552 |
| Toll Related (3) | \$3,279,189 | \$3,808,131 | \$4,213,853 | \$3,372,507 | \$3,863,916 | \$3,030,965 | \$3,609,780 | \$8,308,082 | \$33,486,423 |
| Basic Network Revenues |  |  |  |  |  |  |  |  |  |
| (1)+(2)+(3) | \$8,937,551 | \$9,287,450 | \$11,003,989 | \$10,466,059 | \$7,407,162 | \$7,269,241 | \$8,192,860 | \$16,309,721 | \$78,874,033 |
| Other Local | \$493,630 | \$666,126 | \$1,125,714 | \$524,762 | \$587,184 | \$413,581 | \$151,331 | \$661,698 | \$4,624,026 |
| Private Line and Other Toll | \$192,151 | \$128,912 | \$178,576 | \$200,963 | $(\$ 98,651)$ | \$79,070 | \$7,529 | \$252,273 | \$940,823 |
| Miscellaneous \& all other | \$835,293 | \$1,822,598 | \$1,288,538 | \$790,539 | \$284,476 | \$593,180 | \$539,092 | \$2,335,307 | \$8,489,023 |
| Total Operating Revenue | \$10,458,625 | \$11,905,086 | \$13,596,817 | \$11,982,323 | \$8,180,171 | \$8,355,072 | \$8,890,812 | \$19,558,999 | \$92,927,905 |
| Basic Network Revenue as \% of Total Operating Revenue | 85.5\% | 78.0\% | 80.9\% | 87.3\% | 90.6\% | 87.0\% | 92.1\% | 83.4\% | 84.9\% |
| Total Plant In Service Net Plant | \$26,657,238 \$29,788,112 \$39,444,549 |  |  | \$30,060,497 \$24,965,974 \$25,876,242 \$27,278,783 \$54,710,347 |  |  |  |  | \$258,781,742 |
|  | \$15,863,674 \$18,998,012 \$23,105,268 |  |  | \$17,309,135 \$14,991,604 \$15,204,554 \$17,221,014 \$33,686,791 \$156,380,052 |  |  |  |  |  |
|  | Basic network revenues per access line per month |  |  |  |  |  |  |  |  |
| Primary Access Service Other local exchange Toll related | \$21.28 | \$20.68 | \$23.02 | $\$ 30.62$ | \$15.32 | \$21.82 | \$23.89 | \$20.88 | \$21.98 |
|  | \$4.16 | \$4.78 | \$7.81 | \$6.90 | \$4.06 | \$5.48 | \$4.02 | \$4.78 | \$5.23 |
|  | \$14.74 | \$17.69 | \$19.13 | \$17.84 | \$21.13 | \$19.52 | \$21.98 | \$26.65 | \$20.07 |
| Basic Network Revenues | \$40.18 | \$43.15 | \$49.95 | \$55.36 | \$40.51 | \$46.82 | \$49.90 | \$52.31 | \$47.28 |
| Monthly rate for service including message charges and the Federal Subscriber Line charge. |  |  |  |  |  |  |  |  |  |
| Residential | \$15.91 | \$17.75 | \$17.57 | \$21.71 | \$11.63 | \$14.19 | \$17.29 | \$15.82 | \$16.79 |
| Single-Line Business | \$33.57 | \$34.53 | \$42.05 | \$42.76 | \$27.52 | \$30.22 | \$39.75 | \$33.66 | \$35.91 |
| Multi-Line Business - Key | \$35.97 | \$35.29 | \$64.88 | \$45.15 | \$28.45 | \$38.80 | \$47.02 | \$43.77 | \$42.53 |
| Multi-Line Business - PBX | \$36.92 | \$40.96 | \$69.49 | \$46.51 | \$28.45 | \$43.61 | \$51.49 | \$46.98 | \$45.37 |
| Weighted Averages |  |  |  |  |  |  |  |  |  |
| For access line | \$23.12 | \$24.05 | \$28.31 | \$28.66 | \$17.66 | \$21.63 | \$25.47 | \$22.17 | \$24.49 |
| Additional for touch-tone | \$1.69 | \$1.36 | \$1.08 | \$1.43 | \$0.00 | \$0.62 | \$0.40 | \$0.84 | \$1.02 |
| Connection of a touch-tone line assuming that the drop line and connection block is already present |  |  |  |  |  |  |  |  |  |
| Residential | \$46.03 | \$40.37 | \$43.73 | \$54.32 | \$34.11 | \$38.29 | \$26.63 | \$40.77 | \$42.12 |
| First Business Line | \$67.64 | \$77.07 | \$62.87 | \$103.39 | \$69.46 | \$62.32 | \$51.78 | \$53.22 | \$70.84 |
| including hunting | \$33.82 | \$55.79 | \$23.71 | \$53.19 | \$113.63 | \$42.19 | \$65.38 | \$33.48 | \$50.88 |
| * Year end figures are provided in Table 2-10 of Statistics of Communications Common Carriers. The year average levels for residential lines are the average of the year end 1993 and the 1994 statistics. Business lines were estimated the same way. In general, the RBOC's have approximately $10 \%$ of their business lines going to single-line businesses, with the other $90 \%$ going to multi-line businesses. |  |  |  |  |  |  |  |  |  |
| ** The Revenue and Plant data are summarized from the 1993/94 Statistics of Communications Common Carriers. |  |  |  |  |  |  |  |  |  |

Table A5-3
Selected Data by Local Exchange Telephone Company - 1995

|  | Ameritech | Bell Atlantic | BellSouth | NYNEX | Pacific Bell | SBC | U.S. West | Independents | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Estimated average level of access lines 1995 |  |  |  |  |  |  |  |  |  |
| Residential | 12,001,777 | 12,391,420 | 14,431,574 | 7,750,485 | 9,769,199 | 9,354,984 | 10,233,615 | 20,401,937 | 96,334,990 |
| Single-Line Business | 804,437 | 410,618 | 554,775 | 539,875 | 583,188 | 330,639 | 413,419 | 2,208,624 | 5,845,574 |
| Multi-Line Business | 5,233,127 | 6,062,423 | 5,098,281 | 4,627,566 | 4,998,831 | 3,772,807 | 3,543,647 | 4,815,757 | 38,152,437 |
| Total end user lines | 18,039,340 | 18,864,461 | 20,084,629 | 12,917,926 | 15,351,219 | 13,458,429 | 14,190,681 | 27,426,318 | 140,333,002 |
| Revenues and Plant reported for 1995 in \$000 ** |  |  |  |  |  |  |  |  |  |
| Basic area | \$4,076,922 | \$3,632,879 | \$4,288,859 | \$4,916,387 | \$2,625,532 | \$2,909,412 | \$3,396,606 | \$6,152,205 | \$31,998,802 |
| End user | \$835,086 | \$923,696 | \$1,002,622 | \$929,932 | \$670,150 | \$684,645 | \$724,154 | \$1,294,568 | \$7,064,853 |
| Primary Access Service ( | \$4,912,008 | \$4,556,575 | \$5,291,481 | \$5,846,319 | \$3,295,682 | \$3,594,057 | \$4,120,760 | \$7,446,773 | \$39,063,655 |
| Other local exchange (2) | \$1,000,602 | \$1,115,728 | \$1,842,909 | \$1,311,015 | \$796,255 | \$967,021 | \$809,142 | \$1,522,702 | \$9,365,374 |
| Toll | \$1,261,240 | \$1,325,405 | \$840,540 | \$848,127 | \$1,213,080 | \$739,707 | \$1,179,780 | \$2,395,082 | \$9,802,961 |
| Other Network Access | \$1,981,486 | \$2,473,838 | \$3,178,635 | \$2,638,028 | \$1,745,198 | \$2,382,023 | \$2,397,204 | \$5,750,835 | \$22,547,247 |
| Toll Related (3) | \$3,242,726 | \$3,799,243 | \$4,019,175 | \$3,486,155 | \$2,958,278 | \$3,121,730 | \$3,576,984 | \$8,145,917 | \$32,350,208 |
| Basic Network |  |  |  |  |  |  |  |  |  |
| Revenues (1)+(2)+(3) | \$9,155,336 | \$9,471,546 | \$11,153,565 | \$10,643,489 | \$7,050,215 | \$7,682,808 | \$8,506,886 | \$17,115,392 | \$80,779,237 |
| Other Local | \$523,802 | \$704,729 | \$1,284,552 | \$503,917 | \$407,066 | \$425,900 | \$145,625 | \$768,270 | \$4,763,861 |
| Private Line and Other |  |  |  |  |  |  |  |  |  |
| Toll | \$198,375 | \$111,946 | \$168,658 | \$187,861 | \$24,544 | \$82,149 | \$7,936 | \$213,403 | \$994,872 |
| Miscellaneous \& all other | \$918,153 | \$1,875,124 | \$1,293,835 | \$764,360 | \$343,936 | \$670,126 | \$553,851 | \$2,688,853 | \$9,108.238 |
| Total Operating Revenue | \$10,795,666 | \$12,163,345 | \$13,900,610 | \$12,099,627 | \$7,825,761 | \$8,860,983 | \$9,214,298 | \$20,785,918 | \$95,646,208 |
| Basic Network Revenue as \% of Total Operating |  |  |  |  |  |  |  |  |  |
| Total Plant In Service Net Plant | \$28,010,281 \$32,802,250 |  | \$43,280,629 \$32,836,522 |  | \$26,653,383 | \$27,973,360 | \$30,774,017 | \$61,877,838 | \$284,208,280 |
|  | \$15,059,032 \$18,745,045 |  | \$23,250,051 \$17,293,640 |  | \$14,955,797 | \$15,378,861 | \$17,539,351 | \$35,088,045 | \$157,309,822 |
| Basic network revenues per access line per month |  |  |  |  |  |  |  |  |  |
| Primary Access Service | \$22.69 | \$20.13 | \$21.95 | \$37.71 | \$17.89 | \$22.25 | \$24.20 | \$22.63 | \$23.20 |
| Other local exchange | \$4.62 | \$4.93 | \$7.65 | \$8.46 | \$4.32 | \$5.99 | \$4.75 | \$4.63 | \$5.56 |
| Toll related | \$14.98 | \$16.78 | \$16.68 | \$22.49 | \$16.06 | \$19.33 | \$21.01 | \$24.75 | \$19.21 |
| Basic Network Revenues | \$42.29 | \$41.84 | \$46.28 | \$68.66 | \$38.27 | \$47.57 | \$49.96 | \$52.00 | \$47.97 |
| October 1995 Rate AveragesMonthly rate for service including message charges and the Federal Subscriber Line charge. |  |  |  |  |  |  |  |  |  |
| Residential | \$16.29 | \$16.66 | \$17.44 | \$21.35 | \$14.37 | \$14.93 | \$17.51 | \$16.77 | \$16.93 |
| Single-Line Business | \$32.72 | \$31.60 | \$38.12 | \$37.20 | \$24.85 | \$27.57 | \$36.00 | \$31.79 | \$32.76 |
| Multi-Line Business - Key | \$34.16 | \$30.52 | \$55.89 | \$37.28 | \$25.31 | \$33.70 | \$42.45 | \$36.94 | \$37.72 |
| Multi-Line Business - PB> | \$35.35 | \$36.23 | \$62.89 | \$40.80 | \$25.31 | \$38.29 | \$45.81 | \$43.41 | \$41.89 |
| Weighted Averages |  |  |  |  |  |  |  |  |  |
| For access line | \$22.38 | \$22.36 | \$28.66 | \$28.35 | \$18.33 | \$21.15 | \$24.70 | \$22.09 | \$23.81 |
| Additional for touch-tone | \$0.77 | \$1.40 | \$0.98 | \$0.88 | \$0.00 | \$0.33 | \$0.23 | \$0.62 | \$0.66 |
| Connection of a touch-tone line assuming that the drop line and connection block is already present |  |  |  |  |  |  |  |  |  |
| Residential | \$42.32 | \$40.11 | \$41.70 | \$48.29 | \$33.87 | \$39.37 | \$26.56 | \$39.49 | \$38.86 |
| First Business Line Additional Business | \$55.60 | \$77.72 | \$62.69 | \$94.48 | \$68.95 | \$62.06 | \$52.96 | \$53.99 | \$64.62 |
| Lines including hunting | \$39.57 | \$62.94 | \$36.85 | \$66.27 | \$98.19 | \$48.97 | \$65.23 | \$42.54 | \$55.33 |

* Year end figures are provided in Table 2-10 of Statistics of Communications Common Carriers.

The year average levels for residential lines are the average of the year end 1994 and the 1995 statistics. Business lines were estimated the same way.
In general, the RBOC's have approximately $10 \%$ of their business lines going to single-line businesses,
with the other $90 \%$ going to multi-line businesses.
*The Revenue and Plant data are summarized from the 1994/95 Statistics of Communications Common Carriers.

Appendix $6 \quad$ Long Term Data Related to Telephone Service

|  | AT\&T Rate for a Residential 10-minute Daytime Call on January 1 |  |  | $\begin{gathered} \text { Average Base Rate } \\ \text { for a } \\ \text { Residential Access Line } \end{gathered}$ | Local | Estimated Federal <br> Excise Taxes | deral xes <br> Combined |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1925 |  |  |  |  |  |  |  |
| 1926 |  |  |  |  |  |  |  |
| 1927 |  |  |  |  |  |  |  |
| 1928 | \$0.20 | \$4.00 | \$27.75 |  |  |  |  |
| 1929 | \$0.20 | \$3.60 | \$27.75 |  |  |  |  |
| 1930 | \$0.20 | \$3.50 | \$27.75 |  |  |  |  |
| 1931 | \$0.20 | \$3.50 | \$27.75 |  |  |  |  |
| 1932 | \$0.20 | \$3.50 | \$27.75 |  |  |  |  |
| 1933 | \$0.20 | \$3.50 | \$27.75 |  |  | 7.0\% | 2.1\% |
| 1934 | \$0.20 | \$3.50 | \$27.75 |  |  | 7.0\% | 2.1\% |
| 1935 | \$0.20 | \$3.50 | \$27.75 |  |  | 7.0\% | 2.1\% |
| 1936 | \$0.20 | \$3.50 | \$27.75 |  |  | 7.0\% | 2.1\% |
| 1937 | \$0.20 | \$3.50 | \$23.00 |  |  | 7.0\% | 2.1\% |
| 1938 | \$0.20 | \$2.55 | \$23.00 |  |  | 7.0\% | 2.1\% |
| 1939 | \$0.20 | \$2.55 | \$23.00 |  |  | 7.0\% | 2.1\% |
| 1940 | \$0.20 | \$2.55 | \$23.00 | \$3.67 |  | 7.0\% | 2.1\% |
| 1941 | \$0.20 | \$2.55 | \$13.10 | \$3.67 |  | 8.2\% | 2.7\% |
| 1942 | \$0.20 | \$2.55 | \$13.10 | \$3.64 | 3.5\% | 11.7\% | 6.5\% |
| 1943 | \$0.20 | \$2.20 | \$11.00 | \$3.64 | 7.7\% | 16.1\% | 11.1\% |
| 1944 | \$0.20 | \$2.20 | \$11.00 | \$3.66 | 12.7\% | 24.7\% | 17.5\% |
| 1945 | \$0.20 | \$2.20 | \$11.00 | \$3.67 | 12.7\% | 24.7\% | 17.5\% |
| 1946 | \$0.20 | \$2.20 | \$6.70 | \$3.67 | 12.7\% | 24.7\% | 17.5\% |
| 1947 | \$0.20 | \$2.20 | \$6.70 | \$3.70 | 12.7\% | 24.7\% | 17.5\% |
| 1948 | \$0.20 | \$2.20 | \$6.70 | \$3.91 | 12.7\% | 24.7\% | 17.5\% |
| 1949 | \$0.20 | \$2.20 | \$6.70 | \$4.02 | 12.7\% | 24.7\% | 17.5\% |
| 1950 | \$0.20 | \$2.20 | \$6.70 | \$4.29 | 12.7\% | 24.7\% | 17.5\% |
| 1951 | \$0.20 | \$2.20 | \$6.70 | \$4.48 | 12.7\% | 24.7\% | 17.5\% |
| 1952 | \$0.20 | \$2.20 | \$6.70 | \$4.62 | 12.7\% | 24.7\% | 17.5\% |
| 1953 | \$0.25 | \$2.20 | \$6.70 | \$4.93 | 12.7\% | 24.7\% | 17.5\% |
| 1954 | \$0.25 | \$2.20 | \$7.05 | \$5.10 | 10.9\% | 16.7\% | 13.1\% |
| 1955 | \$0.25 | \$2.20 | \$7.05 | \$5.19 | 9.0\% | 10.0\% | 9.4\% |
| 1956 | \$0.25 | \$2.20 | \$7.05 | \$5.24 | 9.0\% | 10.0\% | 9.4\% |
| 1957 | \$0.25 | \$2.20 | \$7.05 | \$5.28 | 9.0\% | 10.0\% | 9.4\% |
| 1958 | \$0.25 | \$2.20 | \$7.05 | \$5.36 | 9.0\% | 10.0\% | 9.4\% |
| 1959 | \$0.25 | \$2.20 | \$7.05 | \$5.51 | 9.0\% | 10.0\% | 9.4\% |
| 1960 | \$0.25 | \$2.20 | \$6.45 | \$5.55 | 9.0\% | 10.0\% | 9.4\% |
| 1961 | \$0.25 | \$2.20 | \$6.45 | \$5.61 | 9.0\% | 10.0\% | 9.4\% |

Appendix 6 Long Term Data Related to Telephone Service

|  | AT\&T Rate for a Residential 10-minute Daytime Call on January 1 |  |  | Average Base Rate for a Residential Access Line |  | Estimated Federal Excise Taxes |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1962 | \$0.25 | \$2.20 | \$6.45 | \$5.62 |  | 9.0\% | 10.0\% | 9.4\% |
| 1963 | \$0.25 | \$2.20 | \$6.45 | \$5.65 |  | 9.0\% | 10.0\% | 9.4\% |
| 1964 | \$0.45 | \$2.20 | \$6.45 | \$5.66 |  | 9.0\% | 10.0\% | 9.4\% |
| 1965 | \$0.45 | \$2.20 | \$6.45 | \$5.67 |  | 9.0\% | 10.0\% | 9.4\% |
| 1966 | \$0.45 | \$2.20 | \$5.50 | \$5.64 |  | 9.0\% | 10.0\% | 9.5\% |
| 1967 | \$0.45 | \$2.20 | \$5.50 | \$5.60 |  | 9.0\% | 10.0\% | 9.5\% |
| 1968 | \$0.50 | \$2.20 | \$4.90 | \$5.61 |  | 9.0\% | 10.0\% | 9.5\% |
| 1969 | \$0.50 | \$2.20 | \$4.85 | \$5.68 |  | 9.0\% | 10.0\% | 9.5\% |
| 1970 | \$0.50 | \$2.15 | \$4.55 | \$5.76 |  | 9.0\% | 10.0\% | 9.5\% |
| 1971 | \$0.50 | \$2.10 | \$4.50 | \$6.04 |  | 9.0\% | 10.0\% | 9.5\% |
| 1972 | \$0.52 | \$2.34 | \$4.50 | \$6.38 |  | 9.0\% | 10.0\% | 9.5\% |
| 1973 | \$0.52 | \$2.34 | \$4.50 | \$6.69 |  | 8.1\% | 9.0\% | 8.5\% |
| 1974 | \$0.52 | \$2.48 | \$4.67 | \$7.08 |  | 7.2\% | 8.0\% | 7.6\% |
| 1975 | \$0.52 | \$2.48 | \$4.67 | \$7.32 |  | 6.3\% | 7.0\% | 6.6\% |
| 1976 | \$0.70 | \$3.15 | \$4.16 | \$7.81 |  | 5.4\% | 6.0\% | 5.7\% |
| 1977 | \$0.91 | \$3.25 | \$3.96 | \$8.07 |  | 4.5\% | 5.0\% | 4.8\% |
| 1978 | \$1.00 | \$3.34 | \$3.96 | \$8.31 |  | 3.6\% | 4.0\% | 3.8\% |
| 1979 | \$1.00 | \$3.34 | \$3.96 | \$8.40 |  | 2.7\% | 3.0\% | 2.9\% |
| 1980 | \$1.00 | \$3.34 | \$3.96 | \$8.61 |  | 1.8\% | 2.0\% | 1.9\% |
| 1981 | \$1.01 | \$3.54 | \$4.17 | \$9.16 |  | 1.8\% | 2.0\% | 1.9\% |
| 1982 | \$1.13 | \$4.07 | \$4.80 | \$10.18 |  | 0.9\% | 1.0\% | 1.0\% |
| 1983 | \$1.76 | \$4.09 | \$5.15 | \$11.38 | \$10.50 | 2.7\% | 3.0\% | 2.9\% |
| 1984 | \$1.76 | \$4.09 | \$5.15 |  | \$12.10 | 2.7\% | 3.0\% | 2.9\% |
| 1985 | \$1.65 | \$3.87 | \$4.83 |  | \$13.18 | 2.7\% | 3.0\% | 2.9\% |
| 1986 | \$1.75 | \$3.14 | \$3.79 |  | \$14.62 | 2.7\% | 3.0\% | 2.9\% |
| 1987 | \$1.58 | \$2.67 | \$3.28 |  | \$15.10 | 2.7\% | 3.0\% | 2.9\% |
| 1988 | \$1.47 | \$2.45 | \$2.88 |  | \$14.99 | 2.7\% | 3.0\% | 2.9\% |
| 1989 | \$1.47 | \$2.34 | \$2.75 |  | \$15.83 | 2.7\% | 3.0\% | 2.9\% |
| 1990 | \$1.71 | \$2.15 | \$2.50 |  | \$15.94 | 2.7\% | 3.0\% | 2.9\% |
| 1991 | \$1.71 | \$2.10 | \$2.49 |  | \$16.66 | 2.7\% | 3.0\% | 2.9\% |
| 1992 | \$1.70 | \$2.10 | \$2.45 |  | \$16.67 | 2.7\% | 3.0\% | 2.9\% |
| 1993 | \$2.00 | \$2.20 | \$2.50 |  | \$16.77 | 2.7\% | 3.0\% | 2.9\% |
| 1994 | \$2.20 | \$2.40 | \$2.50 |  | \$16.83 | 2.7\% | 3.0\% | 2.9\% |
| 1995 | \$2.40 | \$2.70 | \$2.80 |  | \$17.16 | 2.7\% | 3.0\% | 2.9\% |
| 1996 | \$2.50 | \$2.80 | \$3.00 |  |  | 2.7\% | 3.0\% | 2.9\% |
| 1997 | \$2.60 | \$2.90 | \$3.10 |  |  | 2.7\% | 3.0\% | 2.9\% |


|  | Consumer <br> دrice Indices  <br>  Telephone <br> Telephone <br> Service |  |  | Personal Consumption Expenditures (billions) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1925 | 17.5 |  |  |  |  |  |
| 1926 | 17.7 |  |  |  |  |  |
| 1927 | 17.4 |  |  |  |  |  |
| 1928 | 17.1 |  |  |  |  |  |
| 1929 | 17.1 | 37.3 | 37.3 | \$77.3 | \$0.6 | 0.78\% |
| 1930 | 16.7 | 37.5 | 37.5 | \$69.9 | \$0.6 | 0.86\% |
| 1931 | 15.2 | 37.6 | 37.6 | \$60.5 | \$0.6 | 0.99\% |
| 1932 | 13.7 | 37.7 | 37.7 | \$48.6 | \$0.5 | 1.03\% |
| 1933 | 13.0 | 37.5 | 36.8 | \$45.8 | \$0.4 | 0.87\% |
| 1934 | 13.4 | 37.0 | 36.2 | \$51.4 | \$0.4 | 0.78\% |
| 1935 | 13.7 | 36.8 | 36.0 | \$55.8 | \$0.5 | 0.90\% |
| 1936 | 13.9 | 36.6 | 35.8 | \$62.0 | \$0.5 | 0.81\% |
| 1937 | 14.4 | 36.1 | 35.3 | \$66.7 | \$0.5 | 0.75\% |
| 1938 | 14.1 | 36.1 | 35.3 | \$64.1 | \$0.5 | 0.78\% |
| 1939 | 13.9 | 36.1 | 35.3 | \$67.0 | \$0.6 | 0.90\% |
| 1940 | 14.0 | 36.1 | 35.3 | \$71.0 | \$0.6 | 0.85\% |
| 1941 | 14.7 | 36.3 | 35.4 | \$80.8 | \$0.7 | 0.87\% |
| 1942 | 16.3 | 38.3 | 36.0 | \$88.6 | \$0.8 | 0.90\% |
| 1943 | 17.3 | 39.5 | 35.6 | \$99.5 | \$1.0 | 1.01\% |
| 1944 | 17.6 | 40.7 | 34.6 | \$108.2 | \$1.1 | 1.02\% |
| 1945 | 18.0 | 41.3 | 35.1 | \$119.6 | \$1.2 | 1.00\% |
| 1946 | 19.5 | 41.3 | 35.1 | \$143.9 | \$1.2 | 0.83\% |
| 1947 | 22.3 | 42.0 | 35.7 | \$161.9 | \$1.4 | 0.86\% |
| 1948 | 24.1 | 44.1 | 37.5 | \$174.9 | \$1.6 | 0.91\% |
| 1949 | 23.8 | 46.0 | 39.1 | \$178.3 | \$1.7 | 0.95\% |
| 1950 | 24.1 | 49.7 | 42.3 | \$192.1 | \$1.9 | 0.99\% |
| 1951 | 26.0 | 50.6 | 43.1 | \$208.1 | \$2.2 | 1.06\% |
| 1952 | 26.5 | 52.5 | 44.7 | \$219.1 | \$2.4 | 1.10\% |
| 1953 | 26.7 | 54.3 | 46.2 | \$232.6 | \$2.7 | 1.16\% |
| 1954 | 26.9 | 53.4 | 47.2 | \$239.8 | \$2.8 | 1.17\% |
| 1955 | 26.8 | 52.9 | 48.4 | \$257.9 | \$3.1 | 1.20\% |
| 1956 | 27.2 | 53.5 | 48.9 | \$270.6 | \$3.3 | 1.22\% |
| 1957 | 28.1 | 54.5 | 49.8 | \$285.3 | \$3.6 | 1.26\% |
| 1958 | 28.9 | 56.1 | 51.3 | \$294.6 | \$3.9 | 1.32\% |
| 1959 | 29.1 | 57.4 | 52.5 | \$318.1 | \$4.2 | 1.32\% |
| 1960 | 29.6 | 58.3 | 53.3 | \$332.4 | \$4.5 | 1.36\% |
| 1961 | 29.9 | 58.5 | 53.5 | \$342.6 | \$4.8 | 1.41\% |


|  | All Items | Consumer rice Indices <br> Telephone Service | Telephone Service Without FET | Personal Consumption Expenditures (billions) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1962 | 30.2 | 58.5 | 53.5 | \$363.4 | \$5.1 | 1.41\% |
| 1963 | 30.6 | 58.6 | 53.6 | \$383.0 | \$5.5 | 1.44\% |
| 1964 | 31.0 | 58.6 | 53.6 | \$411.4 | \$5.9 | 1.45\% |
| 1965 | 31.5 | 57.7 | 52.7 | \$444.3 | \$6.5 | 1.46\% |
| 1966 | 32.4 | 56.5 | 51.6 | \$481.9 | \$7.0 | 1.45\% |
| 1967 | 33.4 | 57.3 | 52.3 | \$509.5 | \$7.7 | 1.51\% |
| 1968 | 34.8 | 57.3 | 52.3 | \$559.8 | \$8.3 | 1.49\% |
| 1969 | 36.7 | 58.0 | 53.0 | \$604.7 | \$9.3 | 1.53\% |
| 1970 | 38.8 | 58.7 | 53.6 | \$648.1 | \$10.1 | 1.56\% |
| 1971 | 40.5 | 61.6 | 56.3 | \$702.5 | \$11.0 | 1.57\% |
| 1972 | 41.8 | 65.0 | 59.4 | \$770.7 | \$12.4 | 1.61\% |
| 1973 | 44.4 | 66.7 | 61.4 | \$851.6 | \$14.1 | 1.66\% |
| 1974 | 49.3 | 69.5 | 64.6 | \$931.2 | \$15.5 | 1.67\% |
| 1975 | 53.8 | 71.7 | 67.2 | \$1,029.1 | \$17.7 | 1.72\% |
| 1976 | 56.9 | 74.3 | 70.3 | \$1,148.8 | \$19.8 | 1.72\% |
| 1977 | 60.6 | 75.2 | 71.8 | \$1,277.1 | \$21.5 | 1.69\% |
| 1978 | 65.2 | 76.0 | 73.2 | \$1,428.8 | \$23.9 | 1.67\% |
| 1979 | 72.6 | 75.8 | 73.7 | \$1,593.5 | \$25.7 | 1.61\% |
| 1980 | 82.4 | 77.7 | 76.2 | \$1,760.4 | \$27.6 | 1.57\% |
| 1981 | 90.9 | 84.6 | 83.0 | \$1,941.3 | \$30.9 | 1.59\% |
| 1982 | 96.5 | 93.2 | 92.3 | \$2,076.8 | \$35.1 | 1.69\% |
| 1983 | 99.6 | 99.2 | 96.4 | \$2,283.4 | \$38.6 | 1.69\% |
| 1984 | 103.9 | 107.5 | 104.5 | \$2,492.3 | \$41.8 | 1.68\% |
| 1985 | 107.6 | 111.7 | 108.6 | \$2,704.8 | \$46.0 | 1.70\% |
| 1986 | 109.6 | 117.2 | 113.9 | \$2,892.7 | \$49.3 | 1.70\% |
| 1987 | 113.6 | 116.5 | 113.3 | \$3,094.5 | \$51.9 | 1.68\% |
| 1988 | 118.3 | 116.5 | 113.3 | \$3,349.7 | \$54.3 | 1.62\% |
| 1989 | 124.0 | 117.2 | 113.9 | \$3,594.8 | \$58.0 | 1.61\% |
| 1990 | 130.7 | 117.7 | 114.4 | \$3,839.3 | \$60.4 | 1.57\% |
| 1991 | 136.2 | 119.7 | 116.4 | \$3,975.1 | \$63.5 | 1.60\% |
| 1992 | 140.3 | 120.4 | 117.1 | \$4,219.8 | \$70.3 | 1.67\% |
| 1993 | 144.5 | 121.2 | 117.8 | \$4,454.1 | \$74.1 | 1.66\% |
| 1994 | 148.2 | 123.1 | 119.7 | \$4,700.9 | \$79.8 | 1.70\% |
| 1995 | 152.4 | 124.0 | 120.6 | \$4,924.9 | \$85.6 | 1.74\% |
| 1996 | 156.9 | 125.9 | 122.4 | \$5,152.0 | \$91.6 | 1.78\% |
| 1997 |  |  |  |  |  |  |


|  | AT\&T <br> (Busin <br> Local | Chained ess and <br> Intrastate Toll | Rate Index esidential) <br> Interstate \& International Toll | Pro <br> Local | cer Price In $1972=100$ <br> Intrastate Toll | dices <br> Interstate <br> Toll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1925 |  |  |  |  |  |  |
| 1925 1926 |  |  |  |  |  |  |
| 1927 |  |  |  |  |  |  |
| 1928 |  |  |  |  |  |  |
| 1929 |  |  |  |  |  |  |
| 1930 |  |  |  |  |  |  |
| 1931 |  |  |  |  |  |  |
| 1932 |  |  |  |  |  |  |
| 1933 |  |  |  |  |  |  |
| 1934 |  |  |  |  |  |  |
| 1935 |  |  |  |  |  |  |
| 1936 |  |  |  |  |  |  |
| 1937 |  |  |  |  |  |  |
| 1938 |  |  |  |  |  |  |
| 1939 |  |  |  |  |  |  |
| 1940 | 100.0 | 100.0 | 100.0 |  |  |  |
| 1941 | 99.7 | 98.2 | 92.8 |  |  |  |
| 1942 | 99.8 | 98.2 | 92.7 |  |  |  |
| 1943 | 99.6 | 97.0 | 84.8 |  |  |  |
| 1944 | 99.6 | 94.3 | 83.3 |  |  |  |
| 1945 | 99.6 | 94.3 | 79.8 |  |  |  |
| 1946 | 99.6 | 94.1 | 76.5 |  |  |  |
| 1947 | 104.7 | 101.2 | 76.4 |  |  |  |
| 1948 | 109.1 | 105.0 | 76.4 |  |  |  |
| 1949 | 118.6 | 114.4 | 76.4 |  |  |  |
| 1950 | 123.2 | 115.6 | 76.4 |  |  |  |
| 1951 | 127.3 | 117.2 | 76.4 |  |  |  |
| 1952 | 135.0 | 120.6 | 77.6 |  |  |  |
| 1953 | 138.7 | 122.5 | 83.4 |  |  |  |
| 1954 | 140.8 | 125.3 | 83.4 |  |  |  |
| 1955 | 142.1 | 124.9 | 83.4 |  |  |  |
| 1956 | 144.0 | 124.7 | 83.3 |  |  |  |
| 1957 | 146.9 | 124.2 | 83.3 |  |  |  |
| 1958 | 149.8 | 127.8 | 83.5 |  |  |  |
| 1959 | 150.4 | 128.0 | 81.4 |  |  |  |
| 1960 | 150.9 | 129.4 | 81.3 |  |  |  |
| 1961 | 151.0 | 129.7 | 81.3 |  |  |  |


|  | AT\&T <br> (Busin <br> Local | Chained ess and <br> Intrastate Toll | ate Index sidential) <br> Interstate \& International Toll | Produ <br> Local | $1972=100$ <br> Intrastate Toll | dices <br> Interstate <br> Toll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1962 | 151.2 | 124.9 | 81.3 |  |  |  |
| 1963 | 151.2 | 124.5 | 80.3 |  |  |  |
| 1964 | 150.9 | 123.6 | 80.3 |  |  |  |
| 1965 | 150.2 | 119.7 | 77.9 |  |  |  |
| 1966 | 149.7 | 117.8 | 77.9 |  |  |  |
| 1967 | 149.5 | 116.6 | 75.7 |  |  |  |
| 1968 | 151.3 | 116.3 | 76.2 |  |  |  |
| 1969 | 152.3 | 117.4 | 76.3 |  |  |  |
| 1970 | 159.1 | 123.2 | 74.0 |  |  |  |
| 1971 | 167.8 | 136.8 | 76.1 |  |  |  |
| 1972 | 176.2 | 137.7 | 76.4 | 100.0 | 100.0 | 100.0 |
| 1973 | 187.8 | 144.8 | 77.7 | 102.9 | 103.3 | 102.9 |
| 1974 |  |  |  | 108.8 | 107.7 | 103.0 |
| 1975 |  |  |  | 113.4 | 113.8 | 111.7 |
| 1976 |  |  |  | 118.9 | 125.6 | 118.9 |
| 1977 |  |  |  | 119.3 | 131.9 | 120.6 |
| 1978 |  |  |  | 122.1 | 132.0 | 121.9 |
| 1979 |  |  |  | 123.4 | 131.6 | 120.8 |
| 1980 |  |  |  | 128.0 | 132.3 | 124.7 |
| 1981 |  |  |  | 144.1 | 138.1 | 137.6 |
| 1982 |  |  |  | 160.6 | 145.6 | 152.0 |
| 1983 |  |  |  | 169.6 | 152.1 | 153.4 |
| 1984 |  |  |  | 182.4 | 157.1 | 148.9 |
| 1985 |  |  |  | 202.5 | 162.0 | 143.4 |
| 1986 |  |  |  | 223.6 | 158.0 | 133.0 |
| 1987 |  |  |  | 233.1 | 153.5 | 113.7 |
| 1988 |  |  |  | 236.6 | 149.3 | 110.2 |
| 1989 |  |  |  | 250.8 | 151.7 | 108.3 |
| 1990 |  |  |  | 253.4 | 146.3 | 107.8 |
| 1991 |  |  |  | 259.7 | 139.7 | 105.6 |
| 1992 |  |  |  | 260.8 | 140.8 | 107.4 |
| 1993 |  |  |  | 262.4 | 140.2 | 109.8 |
| 1994 |  |  |  | 264.4 | 139.2 | 117.2 |
| 1995 |  |  |  |  |  |  |
| 1996 |  |  |  |  |  |  |
| 1997 |  |  |  |  |  |  |


|  | Local | Linked Ser 1982-1984 <br> Intrastate Toll | $=100$ <br> Interstate <br> Toll | Other $\begin{aligned} & \text { Toll Volume } \\ & \text { Index } \\ & 1925=100 \\ & \hline \end{aligned}$ | conomic Me <br> Moody's <br> Aaa Bond <br> Yields | easures <br> GDP <br> Billions of 1992 Dollars (Chained) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1925 |  |  |  | 100 | 4.88\% | \$848.7 |
| 1926 |  |  |  | 112 | 4.73\% | \$899.4 |
| 1927 |  |  |  | 122 | 4.57\% | \$897.9 |
| 1928 |  |  |  | 134 | 4.55\% | \$906.7 |
| 1929 |  |  |  | 145 | 4.73\% | \$963.6 |
| 1930 |  |  |  | 131 | 4.55\% | \$873.9 |
| 1931 |  |  |  | 92 | 4.58\% | \$798.6 |
| 1932 |  |  |  | 99 | 5.01\% | \$691.5 |
| 1933 |  |  |  | 89 | 4.49\% | \$677.0 |
| 1934 |  |  |  | 92 | 4.00\% | \$728.8 |
| 1935 |  |  |  | 96 | 3.60\% | \$787.9 |
| 1936 |  |  |  | 107 | 3.24\% | \$899.3 |
| 1937 |  |  |  | 109 | 3.26\% | \$808.4 |
| 1938 |  |  |  | 108 | 3.19\% | \$902.0 |
| 1939 |  |  |  | 112 | 3.01\% | \$973.1 |
| 1940 | 33.2 | 47.9 | 86.4 | 118 | 2.84\% | \$1,049.6 |
| 1941 | 33.1 | 47.0 | 80.2 | 136 | 2.77\% | \$1,235.0 |
| 1942 | 33.1 | 47.0 | 80.2 | 152 | 2.83\% | \$1,467.0 |
| 1943 | 33.1 | 46.5 | 73.3 | 179 | 2.73\% | \$1,733.1 |
| 1944 | 33.1 | 45.2 | 72.0 | 195 | 2.72\% | \$1,874.8 |
| 1945 | 33.1 | 45.2 | 69.0 | 217 | 2.62\% | \$1,839.8 |
| 1946 | 33.1 | 45.0 | 66.1 | 252 | 2.53\% | \$1,489.6 |
| 1947 | 34.8 | 48.4 | 66.1 | 265 | 2.61\% | \$1,448.6 |
| 1948 | 36.2 | 50.3 | 66.1 | 269 | 2.82\% | \$1,505.6 |
| 1949 | 39.4 | 54.8 | 66.1 | 264 | 2.66\% | \$1,506.0 |
| 1950 | 40.9 | 55.4 | 66.1 | 260 | 2.62\% | \$1,634.6 |
| 1951 | 42.3 | 56.1 | 66.1 | 263 | 2.86\% | \$1,803.7 |
| 1952 | 44.8 | 57.8 | 67.0 | 269 | 2.96\% | \$1,874.0 |
| 1953 | 46.0 | 58.7 | 72.1 | 278 | 3.20\% | \$1,949.1 |
| 1954 | 46.8 | 60.0 | 72.1 | 291 | 2.90\% | \$1,923.2 |
| 1955 | 47.2 | 59.8 | 72.1 | 323 | 3.06\% | \$2,030.1 |
| 1956 | 47.8 | 59.7 | 72.0 | 356 | 3.36\% | \$2,071.7 |
| 1957 | 48.8 | 59.5 | 72.0 | 385 | 3.89\% | \$2,106.4 |
| 1958 | 49.8 | 61.2 | 72.2 | 411 | 3.79\% | \$2,090.4 |
| 1959 | 50.0 | 61.3 | 70.4 | 450 | 4.38\% | \$2,212.3 |
| 1960 | 50.1 | 62.0 | 70.2 | 484 | 4.41\% | \$2,261.7 |
| 1961 | 50.2 | 62.1 | 70.2 | 512 | 4.35\% | \$2,309.8 |

## Long Term Data Related to Telephone Service

|  | Linked Series$1982-1984=100$ |  |  | Other Economic Measures |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Local | Intrastate Toll | Interstate Toll | $\begin{aligned} & \text { Toll Volume } \\ & \text { Index } \\ & 1925=100 \\ & \hline \end{aligned}$ | Moody's <br> Aaa Bond Yields | GDP <br> Billions of 1992 Dollars (Chained) |
| 1962 | 50.2 | 59.8 | 70.2 | 556 | 4.33\% | \$2,449.1 |
| 1963 | 50.2 | 59.6 | 69.4 | 595 | 4.26\% | \$2,554.0 |
| 1964 | 50.1 | 59.2 | 69.4 | 652 | 4.40\% | \$2,702.9 |
| 1965 | 49.9 | 57.3 | 67.3 | 727 | 4.49\% | \$2,874.8 |
| 1966 | 49.7 | 56.4 | 67.3 | 817 | 5.13\% | \$3,060.2 |
| 1967 | 49.6 | 55.9 | 65.4 | 899 | 5.51\% | \$3,140.2 |
| 1968 | 50.2 | 55.7 | 65.9 | 1,014 | 6.18\% | \$3,288.6 |
| 1969 | 50.6 | 56.2 | 66.0 | 1,177 | 7.03\% | \$3,388.0 |
| 1970 | 52.8 | 59.0 | 63.9 | 1,304 | 8.04\% | \$3,388.2 |
| 1971 | 55.7 | 65.5 | 65.8 | 1,372 | 7.39\% | \$3,500.1 |
| 1972 | 58.5 | 66.0 | 66.0 | 1,520 | 7.21\% | \$3,690.3 |
| 1973 | 60.2 | 68.2 | 68.0 | 1,639 | 7.44\% | \$3,902.3 |
| 1974 | 63.7 | 71.0 | 68.0 | 1,762 | 8.57\% | \$3,888.2 |
| 1975 | 66.3 | 75.0 | 73.8 | 2,199 | 8.83\% | \$3,865.1 |
| 1976 | 69.6 | 82.8 | 78.6 | 2,506 | 8.43\% | \$4,081.1 |
| 1977 | 69.8 | 87.0 | 79.6 | 2,837 | 8.02\% | \$4,279.3 |
| 1978 | 71.5 | 87.1 | 80.5 | 3,266 | 8.73\% | \$4,493.7 |
| 1979 | 72.2 | 86.8 | 79.8 | 3,664 | 9.63\% | \$4,624.0 |
| 1980 | 74.9 | 87.3 | 82.3 | 3,891 | 11.94\% | \$4,611.9 |
| 1981 | 84.3 | 91.1 | 90.8 | 4,189 | 14.17\% | \$4,724.9 |
| 1982 | 94.0 | 96.1 | 100.4 | 4,430 | 13.79\% | \$4,623.6 |
| 1983 | 99.3 | 100.3 | 101.3 | 4,757 | 12.04\% | \$4,810.0 |
| 1984 | 106.8 | 103.6 | 98.3 | 5,765 | 12.71\% | \$5,138.2 |
| 1985 | 118.5 | 106.9 | 94.7 | 6,702 | 11.37\% | \$5,329.5 |
| 1986 | 130.8 | 104.2 | 87.9 | 7,199 | 9.02\% | \$5,489.9 |
| 1987 | 136.4 | 101.3 | 75.1 | 7,781 | 9.38\% | \$5,648.4 |
| 1988 | 138.5 | 98.5 | 72.8 | 8,378 | 9.71\% | \$5,862.9 |
| 1989 | 146.8 | 100.1 | 71.5 | 8,946 | 9.26\% | \$6,060.4 |
| 1990 | 148.3 | 96.5 | 71.2 | 9,301 | 9.32\% | \$6,138.7 |
| 1991 | 152.0 | 92.2 | 69.7 | 9,542 | 8.77\% | \$6,079.0 |
| 1992 | 152.6 | 92.9 | 70.9 | 10,011 | 8.14\% | \$6,244.4 |
| 1993 | 153.6 | 92.5 | 72.5 | 10,295 | 7.22\% | \$6,386.4 |
| 1994 | 154.7 | 91.8 | 77.4 | 10,721 | 7.97\% | \$6,608.7 |
| 1995 |  |  |  |  | 7.59\% | \$6,742.9 |
| 1996 |  |  |  |  |  | \$7,008.7 |
| 1997 |  |  |  |  |  |  |

# ApPENDIX 7 <br> Technical Notes on Telephone Service Price Indices 

## A. Introduction to CPI Price Indices

The Consumer Price Index (CPI) is the nation's most widely recognized measure of retail price changes. Initially termed a cost of living index, the CPI was first published for 1913 through 1919 to help set the wage levels of workers in shipyards. The CPI is now published monthly by the U.S. Department of Labor Bureau of Labor Statistics (BLS), and measures the prices all urban consumers pay for most goods and services. This index is also referred to as the CPI-U, to distinguish it from a related series that covers prices paid by wage earners and clerical workers. BLS defines urban areas as Metropolitan Statistical Areas (MSAs) and small cities with populations greater than 2500. About 80 percent of the American population live in urban areas. Aside from government provided services, the CPI survey covers all of the principle goods and services purchased by consumers for everyday living.

The BLS publishes a CPI index for local telephone service, interstate toll service, and intrastate toll service. These indices are combined into an index for all telephone services used by consumers. Telephone service price changes are also included in the CPI all items index, as well as in other broad indices. Based on sample weight, telephone prices account for roughly $2 \%$ of the CPI for all items.

The CPI is representative of national price changes, both urban and rural, for many purposes. This is true for the CPI indices covering telephone service prices. Telephone toll service charges are based on distance and time of day, and are not different in rural areas. Local rates may be different in rural areas than in the cities and small towns covered by the CPI. However, rural rates often change by almost the same percentage as do rates in cities and small towns. Thus, the telephone series would not be very different if it covered rural consumers in addition to urban consumers. The index is not, however, intended to represent the change in costs to businesses. While businesses often pay toll charges from the same tariff schedules that apply to residential traffic, businesses pay different charges for local services, and use many services not covered by the CPI.

The BLS constructs the CPI by collecting a sample of prices for a "market basket" of specific goods and services. Prices are collected in 85 urban areas. Prices are collected from about 60,000 housing units and from approximately 21,000 retail establishments -- department stores, supermarkets, hospitals, filling stations, and other providers of retail goods and services. Each month, the BLS reprices essentially the same market basket of goods using prevailing prices. The indices represent the ratio of current prices to base period prices. The BLS sample includes thousands of items grouped into several hundred product or service indices. The percentage changes for service and product indices are combined into broader indices. For example, one
grouping consists of all services and another consists of all commodities. Indices are also grouped into seven major cost categories: food and beverages, housing, apparel and upkeep, transportation, medical care, entertainment, and other goods and services. The telephone service index is classified with fuel and other utilities, which is a subcategory within housing.

The BLS prepares and releases CPI data about 16 days after the end of the month being reported. Subscribers can receive selected data by mailgram and a detailed report is published somewhat later. See for example, U.S. Department of Labor, Bureau of Labor Statistics, CPI Detailed Report for January 1995 released February, 1995.

The BLS has published monthly values of the CPI for all items starting in January, 1913. The BLS has published an average annual telephone price index since 1935. This index is based on the prices of both local and toll services. The BLS began publishing quarterly data on telephone prices in 1945, although first and third quarter estimates are unavailable for 1964 and 1965. The BLS has published a monthly index of telephone service prices since January 1969. The BLS began publishing monthly indices of local service, interstate toll, and intrastate toll rates in January 1978, following the 1977 CPI revision of the CPI.

The BLS continues to publish annual averages for telephone price indices. At one time, these annual figures were an average of the monthly rates for January of the year through January of the following year, with the two January values each having half the weight of other months. Since 1977, the annual averages are the simple average of monthly index values for the calendar year. Annual averages are useful for comparisons with expenditure, revenue, and expense data, because these data are usually available for calendar years. Monthly data are useful for comparing changes in prices between two points in time. For example, the percentage change in index levels between December of one year and December of the next year is a good indicator of the aggregate change in rates during the year.

## B. The CPI Telephone Service Samples

The current local service sample consists of about 500 price quotes. Several price quotes are obtained in each of the sample areas. The quotes are not identical from city-to-city, and the BLS does not attempt to calculate a basic access service rate or installation charge on a city by city basis. Each of the price quotes represents a customer bill, and includes the same services that a real customer might take.

The current sample of local services quotes was selected from two clusters -- main station charges and telephone equipment leases. About $95 \%$ of the quotes are for main station service, which would be some form of local access service. The quotes are representative of typical customer bills. Thus, if roughly three quarters of households took touch-tone service, then about three quarters of the quotes would be for an access
line with touch-tone capability. Most quotes are for private line service with unlimited calling, but some quotes are for party line service and some are for measured or message calling. Individual price quotes might include an inside wiring maintenance plan, special features such as call waiting or speed dialing, installation charges, maintenance charges, charges for verification of a busy line, directory assistance charges, or even for a second access line. The quote would include message unit charges if the quote is for a measured or message rate access line. FCC and state subscriber line charges are considered to be part of the main station charge. Therefore, the local service index covers changes in federal subscriber line charges, even though these are interstate charges. The price quotes include all taxes and surcharges that apply to local charges.

The second local service cluster, less than $5 \%$ of quotes, represents the cost of leasing a telephone. Telephone sets were once known as "Main Stations" and are now generally referred to as "Customer Premises Equipment" (CPE). Main station telephone service included a primary instrument through the 1970s. CPE was detariffed in the early 1980s, and is now provided on a non-regulated, competitive basis. Prior to the 1987 revision, the cost of a primary instrument was included as part of all local exchange service quotes. Most consumers, however, no longer lease telephones and CPE is no longer considered part of local telephone service. The BLS reduced the weight afforded CPE as part of its 1987 revision. Some households in areas served by Bell Operating companies lease equipment from AT\&T. Subscribers in other areas may lease equipment from the local telephone company, or from affiliates of the local telephone company. These lease rates are used for the CPE quotes in the local service sample.

Most consumers purchase and install their own CPE. The BLS now includes telephone sets with other consumer durable equipment. The term durable refers to items that are not typically consumed within 12 months. The BLS does not expect to publish separate CPE price indices in the near future, but includes CPE prices in calculating changes for the CPI index of all consumer durables. CPE purchases are not covered by the local telephone service price index.

The CPI local service index does not cover some services that are used by consumers. Local coin telephone service has been excluded because it represents a small percentage of consumer expenditures. Cellular service and subsidized service plans, such as lifeline and Link-Up rates, were not prevalent in the base period, and therefore were not included in the sample. These services could be covered in the future.

The sample of interstate and intrastate toll calls was drawn from larger toll call samples provided by telephone companies. Each call is specified by point of origination, point of destination, day of week, time of day, length of call, and type of call (Direct dialed, collect, placed by the operator, etc). Some quotes are for credit card calls and other types of operator assisted calls. Interexchange carriers (IXCs) other than AT\&T have been included in the sample since 1987. New quotes are "linked" or "chained" into the index, so that the index did not change when IXCs other than AT\&T were included. At one time other IXCs offered rates that were significantly lower than AT\&T's toll rates.

Today, the basic schedule rates are similar for the larger carriers. However, customers with large toll bills can obtain significant discounts. Prior to 1994, these discounts were not included in the index, however, in 1994 the BLS began to incorporate some discounts into the interstate toll index. Between $20 \%$ and $30 \%$ of the quotes reflect a discount.

Intrastate toll includes all residential toll calls within a state. The intrastate toll samples consist of about 570 quotes from AT\&T, other IXCs, and from local exchange carriers, who provide substantial amounts of intrastate toll service. No calling discounts are reflected in this index.

The interstate toll sample consists of about 600 quotes from AT\&T and other IXCs. Interstate toll includes all calls made within the fifty states, and excludes international services, as well as calls between the mainland and Puerto Rico, Guam, or the Virgin Islands. Interstate toll service includes calls between Alaska and the mainland, and Hawaii and the mainland. Prior to 1982, calls to Alaska and Hawaii were governed by different tariffs than calls between the forty-eight mainland states. The interstate toll index fell in early 1979 when these rates declined. Rates for calls between Alaska, Hawaii, and the Mainland were reduced when the tariffs were integrated in 1982.

Alaska and Hawaii tariff rates are probably under represented in the CPI because Anchorage and Honolulu -- the areas sampled in these states -- are included in the CPI sample as "self representing" cities. Samples drawn from self representing cities are weighted by the population of the city. Other cities, by contrast, were sampled from groups of cities in the same region of the country, grouped by size. The cities sampled are given relatively greater weight so that they represent all of the weight for the group. Consequently, local and toll service rates from mainland cities are, in effect, used to represent urban areas in Alaska and Hawaii outside of Anchorage and Honolulu. There are significant differences between telephone services in Alaska and Hawaii compared with the mainland. For example, most interstate calls from Alaska and Hawaii are billed in the longest mileage bands, where prices have declined the most over time. Understating this traffic, however, does not significantly bias the interstate toll index because the populations outside of Anchorage and Honolulu are relatively small.

## C. Other Features of CPI Telephone Indices

The BLS determines the changes in telephone prices each month by repricing the same sample of local services and toll calls. BLS field representatives determine the exact amount that a consumer would be charged for the specific services in the sample, including any charge that would appear on a normal bill for that service. Therefore, the indices cover taxes and surcharges. Appendix 6 shows estimates of the average federal excise tax rates over time, and the effect that changes in taxes have had on the CPI index for telephone service.

The change in index values from one month to the next may be a poor measure of a particular rate change or pricing trend. The BLS divides each month into three pricing periods -- early, middle, and late. The BLS prices about a third of the quotes in each pricing period. Thus, one particular quote will always be priced in the second week of the month, while another quote will always be priced at the end of the month. One consequence of this procedure is that a nationwide change in toll rates could appear as a price change in consecutive months. This was more pronounced before 1987, when prices for some quotes were obtained every second month.

Prices for local services are also obtained in all sample areas each month. As with toll prices, the use of three sample periods within the month makes some changes in local rates overlap months. This is more complicated for recurring local charges because local exchange companies send bills to customers throughout the month on fixed schedules. Many local exchange companies prorate changes in recurring rates from the date the tariff takes effect to the bill date. The prorated portion may appear on the bill in the month the tariff takes effect, or may be added to the following month's bill. Thus, the prorating process may either understate or overstate the rate change in the first month it appears on the bill.

Figure 36


January $1983=100$

Prior to the 1987 revision, the BLS collected local and intrastate toll rates in many sample areas in alternate months. This also delayed the appearance of rate changes in the monthly index series. In sum, there are several reasons why a single rate change may appear in CPI indices in two or more months. Figure 36 shows monthly values of the CPI local service index, and the PPI residential service index for January 1983 through January 1988, the period during which the FCC phased in the subscriber line charges.

Figure 37


Figure 37 shows CPI and PPI series for Interstate toll service for the same months. All series have been rebased so that the December 1977 index levels equal 100. The largest index changes are associated with divestiture, and federal access charge policies. The PPI series show sharp changes, while the CPI series tend to show changes in more than one month. Thus, comparing CPI index levels in consecutive months is an unreliable means of estimating the magnitude of a specific rate change.

The BLS attempts to use actual prices paid in the current period to determine the CPI. Consequently, the BLS does not revise already published CPI indices to reflect paid amounts being returned to consumers. Instead, refunds reduce the price paid in the months they are credited to consumer's bills. The price index drops the month a refund appears on the bill, and then rises the month after the refund is completed. For example, the local service index dropped by about 2\% in July 1990, and rose a similar amount the following month. These changes appear to be associated with a rate refund in Wisconsin in July.

The CPI would not reflect direct government subsidies to ratepayers, or payments to carriers on behalf of ratepayers. The CPI does, however, reflect actual tariffed prices for generally available services even if a commission has ordered rates that are below cost. Thus, the form of a subsidy may affect its impact, or lack of impact, on the price indices.

Changes in local service area boundaries can have a significant impact on customer bills. Local exchange carriers frequently increase the local calling area for an exchange, increase the price of exchange service in part or all of the exchange, and drop the toll charge for calls that used to be between exchanges, but are now local to the exchange. On average, consumers may be paying exactly the same amount for service within the extended area (e.g., the increase in the local rate may be exactly offset by the drop in toll revenues). In such a case the BLS attempts to "link" or "chain" the series so that there is no change in either the local or intrastate toll indices. If total revenue is expected to increase as a result of the boundary change, then the local service index will rise. If total revenue is expected to fall, then the local service index might fall, even though local rates rose in the exchange.

The BLS does not routinely publish revised indices, but would do so if a correction would result in a $1 \%$ change in an entry level index for the total United States. (Some non
telephone indices are published by region or city and could be revised even if the nationwide price index would not change by 1\%.) Corrections are generally included in the index in the month discovered. Corrections result from such factors as late filed data, carriers neglecting to include a rate change, and failures to associate changes in rates with change in service areas. Corrections are most obvious in the interstate toll index, since there are relatively few interstate rate changes. For example, the interstate toll index increased $.8 \%$ in February 1984 as a result of a reporting error. The BLS has not revised the February index number.

The BLS publishes seasonally adjusted series for some CPI indices. Many price changes occur at the same time each year and are balanced or reversed by prices changed later in the year. For example, resort hotel rates increase dramatically "in season" and then fall "off season". These seasonal patterns may obscure analysis of short term trends. The BLS uses statistical tests to determine whether a price series shows seasonality, and to revise indices to remove the average seasonal change. These adjustments do not affect annual averages. Telephone prices do not fluctuate seasonally, and so the BLS does not create seasonally adjusted telephone indices.

## D. The CPI Revision Process

The BLS revises the CPI sample cities and base weights at roughly 10 year intervals. The BLS has used these periodic revisions to introduce new statistical and sampling techniques, and to make major changes in definitions. For example, the BLS used the 1977 revision to introduce the local, intrastate toll and interstate toll indices. Prior to 1977, the BLS collected local rates in sample cities on a census basis rather than on a sample basis. In other words, they collected the same rate information in each city, and weighted the rates based on the actual number of subscribers. The BLS did not sample toll rates prior to 1977. Instead, AT\&T provided estimates of the revenue effects of toll rate changes. The BLS then combined the local and toll data to create the telephone service index. The methodology described in the preceding sections was introduced in 1977.

BLS used the 1987 revision to reselect the sample cities, and revise the weights. About 30 of the 85 urban areas were replaced in the 1987 revision, and area weights were adjusted using 1980 census data. This type of revision makes the CPI sample more consistent with current population patterns.

The BLS also used the 1987 revision to adopt the 1982 to 1984 base period, and to revise the relative weights of the local and toll indices. In constructing broad indices, the index for a good or service is weighted by the relative importance of that item to urban consumers. The weight represents the total expenditures on the item in the base period divided by the total expenditures on all items in the base period. Prior to the 1977 revision, local service received significantly more than half of the sample weight. In 1977,

BLS began using weights based on the 1972-73 consumer expenditure survey. At that time local service still accounted for more than half of residential revenues.

The 1987 weights reflected the continued growth in toll usage. The 1987 weights were based on consumers expenditure surveys for 1982 through 1984, and carrier revenue data, such as the residential revenue figures that were reported by Bell Operating Companies in the MR-4 reports. (MR-4 reports are monthly financial reports voluntarily filed with the FCC by the Bell Operating Companies. AT\&T filed MR-4 reports through 1987. After 1987, most of the Bell companies stopped filing revenue breakdowns of residential verses business customers.)

The CPI telephone service weights have lagged actual changes in spending patterns, which means that the CPI for telephone service has under weighted the dramatic reductions in toll rates that have occurred since 1984. Nonetheless, telephone service spending patterns are relatively stable compared to many items covered by the CPI, and CPI telephone indices appear to be highly reliable.

The BLS also updates the CPI by rotating the sample of price quotes. For many goods and services, the BLS attempts to reselect the price quotes in one fifth of the urban areas each year. To do this, the BLS reselects the businesses from which prices will be obtained, and reselects the specific goods and services that will be priced. This procedure helps ensure that the BLS prices the goods and services that are actually being used by consumers. The BLS did not rotate the telephone service quotes between 1977 and 1987. The BLS started rotating the local service sample after the 1987 revision, and plans to begin rotating toll quotes in the near future. The rotation of the toll quotes has been delayed, in part, because of the complexity and volatility of toll discount plans.

Sample rotation allows the CPI to better reflect usage trends. Usage of optional services such as call waiting is growing at a faster rate than basic access service. New quotes are more likely to have call waiting as one of the price elements. AT\&T's toll market share has declined significantly in the past few years. The number of AT\&T quotes will probably be reduced when the toll sample is rotated.

## E. Introduction to Producer Price Indices

The Producer Price Index (PPI) is a statistical series established by the BLS to measure changes in the prices charged by producers. The index was formerly known as the Wholesale Price Index, and was first published in 1902. The BLS now publishes overall indices by stage of processing -- finished goods, intermediate goods, and crude materials for further processing. The finished goods index is based on indices for finished consumer goods and capital equipment. The BLS also publishes PPI indices by industry and by commodity groups.

The PPI indices are used for a variety of purposes. For example, the finished goods index is an indicator of the level of inflation in the overall economy. Changes in the intermediate goods index often signal future changes in inflation. The index for crude material other than foods and energy tends to change when overall consumer demand changes, and can indicate future changes in the economy.

The PPI program tracks over 4000 commodity prices. Each commodity is a uniquely specified item or group of items that is produced in quantity, generally by more than one firm. The BLS determines the prices of these commodities by collecting more than 43,000 price quotes each month. The program is voluntary, and sampled firms are asked to supply the actual freight-on-board (f.o.b.) selling prices on a specific day, close to the midpoint of each month. The BLS tracks the prices of goods sold by one industry to another industry or sold to the public. Prices for commodities sold within each industry are excluded. The average price of the commodity is divided by the price of the same commodity in the base period to compute the index, which represents the percentage change in price since the base period.

The producer price index is based on net revenues to the producer. Accordingly, the PPI indices do not change in response to changes in taxes.

The price changes for individual commodities are combined into broader indices based on the relative value of shipments for each commodity. The BLS cannot sample the prices of all commodities. The weight associated with commodities that are not sampled is included with the sampled commodity that is most similar.

The PPI indices are published monthly in a document titled "Producer Price Indices", which is available by subscription from the Superintendent of Documents, U.S. Government Printing Office.

## F. The Discontinued PPI Telephone Service Indices (1972-June 1995)

The PPI program began to cover some services in the 1970s. PPI telephone industry indices are not included in the stage of processing indices, and comprise a separate table in the PPI publication. The following telephone indices were reported for 1972 through June 1995.

| Industry Code | Description |
| :--- | :--- |
| $4811-1$ | Local Service |
| -111 | Residential |
| -112 | Business |
| -113 | Optional additional usage |
| -114 | Coin telephone |
| $4811-2$ | Toll Service |
| -211 | Intrastate Message Telephone Service (MTS) |
| -212 | Interstate MTS |
| -213 | International MTS <br> Interstate WATS <br> Intrastate WATS |
| -247 | Directory advertising |
| $2411-911$ |  |

In June 1995, the BLS revamped and revised the PPI telecommunications indices. These figures were determined in a flash cut process without trying to relate the historical PPI figures to the new indices.

The BLS did not publish indices for some major segments of the telephone industry, including connection charges, private line service, centrex service, common control switching arrangements (CCSA), and toll discount plans such as AT\&T's Megacom service. Since the services tracked are not necessarily representative of these other services, the BLS did not calculate an overall producer price index for telephone service. As of June 1995, the BLS completely revised its PPI for telephone services. They did not however determine the historically equivalent values, using the new weights and formulas, thus values prior to June 1995 are not comparable to those after this date.

Prior to June 1995, the BLS constructed the PPI telephone indices using base year industry data to specify a sample and weights. The MTS sample, for example included all time of day, day of week, and mileage bands pricing strata. As service categories changed over time, the BLS used the base year data to estimate how previous weights should be allocated or combined. Thus, if three mileage bands were combined into two bands, base year data would be used to determine how much weight each of the new mileage bands would have had if they had existed in the base year.

The PPI included four local service categories: residential service recurring charges, business service recurring charges, charges for measured or message rate calls by business and residence customers, and coin service. The residence and business indices covered touch-tone charges and subscriber line charges, but excluded customer premises equipment (CPE) and inside wiring maintenance plan revenues. At one time local service charges covered these items. Charges for these items were chained out of the local indices once the charges for these items became unbundled from the recurring service charges. The indices did not cover newer service features such as call waiting.

Coin service included the charges for local calls made from public and semi-public telephones owned by the local exchange company. Local exchange companies had a monopoly on pay telephone service during the base period. Therefore, the PPI coin sample did not cover pay telephone charges for independently owned pay telephones. The index did cover payments or guarantees associated with semi-public telephones. Semi-public telephones are owned by local exchange companies but located on private property, such as inside a store or hotel. The owner of the property might make guarantees on the minimum level of traffic, or might be paid if telephones generate more than a specified level of traffic. The coin index was based on the carrier's net revenue associated with providing local pay telephone service, not just the per call charge to the consumer.

The sample for the residence, business and optional additional usage indices consisted of 19 companies. The sample of coin service consisted of 9 companies. For this purpose, a company was considered to be all of a local exchange company's operations within a state. The same carrier's operations within a different state were considered to be a different company. The BLS attempted to base the local indices on a census of rates, rather than a sample. Virtually all company billings were tabulated in the service period so that accurate weights could be assigned to each type of service. For example, basic service rates generally vary depending on the number of telephones in each exchange. The BLS collected basic rates for each class of exchanges, and weighted the prices by corresponding revenues in the base period.

The toll service samples were based on usage patterns from the mid 1970s. The intrastate MTS series was based on a sample of 12 companies. Again, a company is considered to be all of a carrier's operations in one state. AT\&T provided virtually all intrastate toll service in the 1970 s, when the BLS selected the sample. With divestiture,
the sample was presumably divided between AT\&T and the Regional Bell Operating Companies, which both provide intrastate toll service.

The interstate MTS index covered all calls between the 50 states, including calls to and from Alaska and Hawaii. However, the sample did not cover competing interexchange carriers, such as $\mathrm{MCl} . \mathrm{MCl}$ filed its first metered service tariff on September 10, 1974, which was after the 1972 base period. Including other carriers would not have resulted in significant differences in the MTS indices.

The international MTS index covered calls between the 50 states and other points in the world. For this purpose, Puerto Rico is considered to be a foreign point. The international MTS sample consisted of traffic between the United States and 10 countries. Price changes were based on net revenue received by the U.S. carrier and not rates paid by customers. International calls are handled by both a U.S. carrier and a foreign carrier. When the U.S. carrier bills the customer, the foreign carrier is compensated based on international settlement agreements. Similarly, when a foreign carrier bills the customer, the U.S. carrier is compensated. Changes in the settlement agreements and international currency rates can significantly change the net revenue actually received by the U.S. carrier, even if rates to the customer remain the same. Of course, changes in tariff rates also affect the net revenue retained by the U.S. carrier.

The Wide Area Toll Service (WATS) index covered traditional WATS service as well as 800 service, which used to be called "IN-WATS". The sample design and weights were based on usage patterns from the mid 1970s, and did not cover newer services, such as the AT\&T Megacom offering. WATS was primarily a discount MTS service in the 1970s. Today, 800 service is considerably larger than traditional WATS. Nonetheless, the weights continued to be based on the usage patterns of the 1970s. The intrastate WATS sample included 13 companies. As above, company refers to all of one carrier's operations within one state. The interstate WATS sample did not cover traffic to Hawaii, Alaska, Puerto Rico, or the Virgin Islands, since these areas were excluded from WATS service in the mid 1970s.

At one time the BLS published an interstate private line index, Series 4811-311. Rapid changes in service offerings quickly made this index an unreliable measure of private line rates.

The PPI telephone service indices covered prices charged by carriers to noncarrier customers. Thus, the private line index did not cover Comsat, which provided circuits to other carriers. Similarly, the indices did not cover the access services that the local exchange carriers provide to interexchange carriers. However, changes in access rates are sometimes accompanied by changes in local service or toll rates, which did appear in the indices.

The BLS policy is to revise PPI indices one month and then four months after the index is published. Most revisions result from late filed price reports and corrections by respondents. The BLS also revises indices to reflect refunds. State rate commissions often order telephone companies to refund amounts that ratepayers paid in the past. They often accomplish this by lowering the rates for some future period. From a regulated accounting standpoint, the carrier receives less revenue for the past period. Since the PPI indices measure revenue received by carriers, rather than rates paid by customers, the BLS revises the PPI index for the past period. The index will show no changes for the period during which carriers actually lower rates.

The BLS began planning a major revision of the PPI telephone indices in 1986. They completed the revision process in June 1995, with these figures based on new definitions, weights, and components. The revision allows the BLS to use weights that reflect current usage, and samples that reflect current service offerings. This revision was done with a flash cut process, with no historical values determined for the new series. Thus future PPI telephone service index values will not be comparable with those previously published, because of the different weights and service offerings included in the indices.

The principal difference between the CPI and the discontinued PPI telephone series is that the CPI measures changes in the cost of an item to consumers while the PPI measures changes in the revenue received by producers. The following chart details several specific differences.

| CPI Telephone Indices | PPI Telephone Indices <br> prior to June 1995 |
| :--- | :--- |
| The all telephone service index is available <br> from 1919 to the present. The local and toll <br> indices are available from 1978. | The local and toll indices are available from <br> 1972 to May 1995. There is no overall PPI <br> for telephone service. |
| CPI weights are based on residential <br> customer usage. | PPI weights are based on carrier revenues <br> from all customers except other carriers. |
| The price samples consist of a selection of <br> items as they might appear on a typical bill. | The sample consists of a census of rates <br> weighted by base period usage. (This <br> changed with the June 1995 revision.) |
| It may take two or three months for the full <br> effect of a rate change to be reflected in an <br> index. This was more pronounced before <br> 1987. | The full effect of a rate change is usually <br> reflected in an index in one month. |
| The samples are drawn from 85 urban areas. | The samples cover all of a company's <br> operations in selected states. PPI indices <br> cover rural rates |


| CPI Telephone Indices | PPI Telephone Indices <br> prior to June 1995 |
| :--- | :--- |
| Samples are based on usage patterns from <br> the middle to late 1980s. | The samples are based on usage patterns <br> from the early to middle 1970s. |
| The indices cover taxes and government <br> surcharges. | The indices do not cover taxes or <br> government surcharges. |
| Refunds reduce the indices the same month <br> they appear on customer bills. | Refunds are attributed to periods when the <br> service was actually provided. Past period <br> index levels are revised to reflect the rates <br> that should have been charged. |
| The local service index covers basic service <br> charges, connection, and service features <br> such as touch-tone, call waiting, and speed <br> dialing. The local service index also covers <br> residential message unit charges. | The local residential and local business <br> indices cover basic service and touch-tone <br> charges. Business and residence message <br> unit charges are covered in a separate index. |
| The local service index does not cover local <br> coin service charges. | Local coin service is covered in a local coin <br> index. |
| The local service index covers leased |  |
| equipment and inside wiring maintenance |  |
| plans. | The local service indices stopped covering <br> leased equipment and inside wiring <br> maintenance when the charges were <br> unbundled. |
| The interstate toll index does not cover <br> international calls. | International calls are covered in a separate <br> index. |
| The toll indices reflect some toll discount <br> plans. Nonetheless, discounts appear to be <br> under represented prior to 1997. | The toll indices do not reflect any toll <br> discount plans. |
| The toll samples include calls carried by <br> LECs, AT\&T, and other interexchange <br> carriers. | The toll samples probably cover calls carried <br> by LECs and AT\&T, but not by other <br> interexchange carriers. |

## G. The Current PPI Telephone Service Indices (since June 1995)

The BLS introduced a revised series of price indices for telephone services in June of 1995. The number of indices has been expanded to 39 , from the 13 which were previously measured. In addition to the finer product detail offered by the new indices, an overall telephone services index has been added. Future editions of the Reference Book will explore the PPI revisions in further detail.

| Table A8-1 <br> 1987 Use of Communications Services by Sector of the Economy |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | SIC industry group | Total Industry Output (Millions) | Purchases of Communications Except Radio \& Television (Millions) | Communications <br> Purchases as Percent of Total Output | Communications Purchases by Industry as a Percent of Total Communications Purchases |
| 1 | Livestock and livestock products | \$87,484.3 | \$221.5 | 0.25\% | 0.14\% |
| 2 | Other agricultural products | \$86,742.0 | \$246.2 | 0.28\% | 0.15\% |
| 3 | Forestry and fishery products | \$7,456.4 | \$3.5 | 0.05\% | 0.00\% |
| 4 | Agricultural, forestry, and fishery services | \$22,200.6 | \$0.5 | 0.00\% | 0.00\% |
| 5 | Iron and ferroalloy ores mining | \$1,522.9 | \$1.9 | 0.12\% | 0.00\% |
| 6 | Nonferrous metal ores mining | \$5,284.1 | \$7.2 | 0.14\% | 0.00\% |
| 7 | Coal mining | \$25,451.8 | \$21.0 | 0.08\% | 0.01\% |
| 8 | Crude petroleum and natural gas | \$84,228.3 | \$120.1 | 0.14\% | 0.07\% |
| 9 | Stone and clay mining and quarrying | \$10,287.7 | \$17.6 | 0.17\% | 0.01\% |
| 10 | Chemical and fertilizer mineral mining | \$2,676.2 | \$4.6 | 0.17\% | 0.00\% |
| 11 | New construction | \$617,049.7 | \$2,312.1 | 0.37\% | 1.43\% |
| 12 | Repair \& maintenance construction | \$173,466.3 | \$2.8 | 0.00\% | 0.00\% |
| 13 | Ordinance and accessories | \$31,437.8 | \$144.5 | 0.46\% | 0.09\% |
| 14 | Food and kindred products | \$325,971.7 | \$447.0 | 0.14\% | 0.28\% |
| 15 | Tobacco manufactures | \$26,382.7 | \$28.1 | 0.11\% | 0.02\% |
| 16 | Broad and narrow fabrics, yarn and thread mills | \$38,244.0 | \$47.9 | 0.13\% | 0.03\% |
| 17 | Miscellaneous textile goods and floor coverings | \$15,981.8 | \$28.2 | 0.18\% | 0.02\% |
| 18 | Apparel | \$64,183.8 | \$94.9 | 0.15\% | 0.06\% |
| 19 | Miscellaneous fabricated textile products | \$16,987.3 | \$29.1 | 0.17\% | 0.02\% |
| 20 | Lumber and wood products, except containers | \$72,327.1 | \$124.0 | 0.17\% | 0.08\% |
| 21 | Wood containers | \$547.4 | \$1.4 | 0.26\% | 0.00\% |
| 22 | Household furniture | \$18,418.6 | \$42.0 | 0.23\% | 0.03\% |
| 23 | Other furniture and fixtures | \$18,358.3 | \$46.8 | 0.25\% | 0.03\% |
| 24 | Paper \& allied products, except containers | \$81,982.3 | \$152.1 | 0.19\% | 0.09\% |
| 25 | Paperboard containers and boxes | \$25,510.8 | \$72.0 | 0.28\% | 0.04\% |
| 26 | Printing \& publishing | \$137,104.4 | \$446.9 | 0.33\% | 0.28\% |
| 27 | Chemicals and selected chemical products | \$97,886.9 | \$246.7 | 0.25\% | 0.15\% |
| 28 | Plastics and synthetic materials | \$40,672.4 | \$90.9 | 0.22\% | 0.06\% |
| 29 | Drugs, cleaning and toilet preparations | \$69,241.5 | \$205.5 | 0.30\% | 0.13\% |
| 30 | Paints \& allied products | \$12,072.4 | \$40.1 | 0.33\% | 0.02\% |
| 31 | Petroleum refining and related industries | \$137,871.1 | \$186.6 | 0.14\% | 0.12\% |
| 32 | Rubber \& miscellaneous plastics products | \$85,571.6 | \$248.6 | 0.29\% | 0.15\% |
| 33 | Leather tanning and finishing | \$2,222.1 | \$4.9 | 0.22\% | 0.00\% |
| 34 | Footwear and other leather products | \$6,477.5 | \$17.5 | 0.27\% | 0.01\% |
| 35 | Glass and glass products | \$16,085.3 | \$122.3 | 0.76\% | 0.08\% |
| 36 | Stone and clay products | \$43,731.7 | \$294.8 | 0.67\% | 0.18\% |
| 37 | Primary iron and steel manufacturing | \$68,090.7 | \$149.6 | 0.22\% | 0.09\% |
| 38 | Primary nonferrous metals manufacturing | \$56,376.3 | \$110.6 | 0.20\% | 0.07\% |
| 39 | Metal containers | \$11,904.3 | \$11.2 | 0.09\% | 0.01\% |
| 40 | Heating, plumbing, \& fabricated structural metal products | \$43,930.4 | \$116.7 | 0.27\% | 0.07\% |
| 41 | Screw machine products and stampings | \$31,973.5 | \$84.9 | 0.27\% | 0.05\% |
| 42 | Other fabricated metal products | \$44,424.2 | \$172.7 | 0.39\% | 0.11\% |
| 43 | Engines and turbines | \$14,095.6 | \$38.6 | 0.27\% | 0.02\% |
| 44 | Farm and garden machinery | \$10,976.9 | \$26.4 | 0.24\% | 0.02\% |
| 45 | Construction and mining machinery | \$15,776.5 | \$54.0 | 0.34\% | 0.03\% |
| 46 | Materials handling machinery and equipment | \$7,193.9 | \$29.4 | 0.41\% | 0.02\% |
| 47 | Metalworking machinery and equipment | \$21,226.8 | \$85.5 | 0.40\% | 0.05\% |
| 48 | Special industrial machinery and equipment | \$16,253.8 | \$75.7 | 0.47\% | 0.05\% |
| 49 | General industrial machinery and equipment | \$23,235.9 | \$100.7 | 0.43\% | 0.06\% |


| Table A8-1 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | SIC industry group | Total Industry Output (Millions) | Purchases of Communications Except Radio \& Television (Millions) | Communications <br> Purchases as Percent of Total Output | Communications <br> Purchases by <br> Industry as a <br> Percent of Total <br> Communications <br> Purchases |
| 50 | Miscellaneous machinery, except electrical | \$20,003.1 | \$72.0 | 0.36\% | 0.04\% |
| 51 | Office, computing, and accounting machines | \$55,819.5 | \$792.2 | 1.42\% | 0.49\% |
| 52 | Service industry machines | \$22,408.9 | \$75.5 | 0.34\% | 0.05\% |
| 53 | Electric industrial equipment and apparatus | \$22,665.3 | \$126.0 | 0.56\% | 0.08\% |
| 54 | Household appliances | \$16,360.5 | \$35.8 | 0.22\% | 0.02\% |
| 55 | Electric lighting and wiring equipment | \$17,614.8 | \$65.2 | 0.37\% | 0.04\% |
| 56 | Radio, TV, and communication equipment | \$40,699.5 | \$159.0 | 0.39\% | 0.10\% |
| 57 | Electronic components and accessories | \$48,653.6 | \$186.8 | 0.38\% | 0.12\% |
| 58 | Miscellaneous electrical machinery and supplies | \$20,823.0 | \$81.5 | 0.39\% | 0.05\% |
| 59 | Motor vehicles and equipment | \$203,105.4 | \$468.5 | 0.23\% | 0.29\% |
| 60 | Aircraft parts | \$82,127.6 | \$359.0 | 0.44\% | 0.22\% |
| 61 | Other transportation equipment | \$24,082.1 | \$91.6 | 0.38\% | 0.06\% |
| 62 | Scientific and controlling instruments | \$85,463.4 | \$431.9 | 0.51\% | 0.27\% |
| 63 | Optical, opthalmic and photographic equipment | \$19,725.4 | \$42.0 | 0.21\% | 0.03\% |
| 64 | Miscellaneous manufacturing | \$33,089.1 | \$70.9 | 0.21\% | 0.04\% |
| 65 | Transportation and warehousing | \$285,767.5 | \$2,988.5 | 1.05\% | 1.85\% |
| 66 | Communications, except radio and TV | \$161,126.8 | \$33,184.2 | 20.60\% | 20.60\% |
| 67 | Radio and television broadcasting | \$29,396.2 | \$189.8 | 0.65\% | 0.12\% |
| 68 | Private electric, gas, water and sanitary services | \$211,182.0 | \$289.1 | 0.14\% | 0.18\% |
| 69 | Wholesale and retail trade | \$844,444.2 | \$10,146.9 | 1.20\% | 6.30\% |
| 70 | Finance and insurance | \$459,462.0 | \$7,597.0 | 1.65\% | 4.71\% |
| 71 | Real estate and rental | \$805,418.9 | \$1,539.2 | 0.19\% | 0.96\% |
| 72 | Hotels; personal and repair service (exc. auto) | \$107,299.8 | \$1,568.2 | 1.46\% | 0.97\% |
| 73 | Business and professional services except medicinal | \$475,363.9 | \$7,387.2 | 1.55\% | 4.58\% |
| 74 | Eating and drinking places | \$209,394.0 | \$803.6 | 0.38\% | 0.50\% |
| 75 | Automobile repair and services | \$130,704.0 | \$1,020.6 | 0.78\% | 0.63\% |
| 76 | Amusements | \$78,192.4 | \$657.6 | 0.84\% | 0.41\% |
| 77 | Health, educational, and social services and nonprofit organizations | \$491,189.3 | \$4,535.6 | 0.92\% | 2.81\% |
| 78 | Federal government enterprises | \$45,396.3 | \$146.2 | 0.32\% | 0.09\% |
| 79 | State and local government enterprises | \$69,483.9 | \$233.6 | 0.34\% | 0.14\% |
|  | Total business output <br> Total communications sales as factor inputs | $\$ 7,991,042.0$ | \$82,523.0 | 1.03\% | 51.22\% |
|  | Personal consumption expenditures | \$3,072,252.0 | \$61,962.7 | 2.02\% | 38.46\% |
|  | Gross private fixed investment fixed investment | \$732,891.3 | \$4,388.9 | 0.60\% | 2.72\% |
|  | Change in business inventories | \$28,037.4 |  |  |  |
|  | Exports | \$348,572.0 | \$2,496.2 |  |  |
|  | Imports | (\$490,442.0) |  |  |  |
|  | Federal government purchases | \$384,927.0 | \$3,853.2 | 1.00\% | 2.39\% |
|  | State and local government purchases | \$549,284.0 | \$4,796.0 | 0.87\% | 2.98\% |
|  | Gross Domestic Product (GDP) | \$4,625,521.7 | \$77,940.0 | 1.68\% | 48.37\% |
|  | Total Commodity Output | \$7,716,018.0 | \$161,127.0 | 2.09\% | 100.00\% |
| Source: Annual Input-Output Accounts of the U.S. Economy, 1987 Benchmark. Table 2 - The Use of Commodities, Disks, published April, 1994. The 1987 estimates are based on relationships in the economy found in the 1982 benchmark Census of manufacturers. |  |  |  |  |  |


| Table A8-2 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | SIC industry group | Total Industry Output (Millions) | Sales to Communications Except Radio \& Television (Millions) | Percentage of Total Sales to Communications Except Radio \& Television | Sales to <br> Communications Except Radio \& TV as percent of Communications Total Revenue |
| 1 | Livestock and livestock products | \$87,484.3 |  | 0.00\% | 0.00\% |
| 2 | Other agricultural products | \$86,742.0 |  | 0.00\% | 0.00\% |
| 3 | Forestry and fishery products | \$7,456.4 |  | 0.00\% | 0.00\% |
| 4 | Agricultural, forestry, and fishery services | \$22,200.6 | \$3.6 | 0.02\% | 0.00\% |
| 5 | Iron and ferroalloy ores mining | \$1,522.9 |  | 0.00\% | 0.00\% |
| 6 | Nonferrous metal ores mining | \$5,284.1 |  | 0.00\% | 0.00\% |
| 7 | Coal mining | \$25,451.8 |  | 0.00\% | 0.00\% |
| 8 | Crude petroleum and natural gas | \$84,228.3 |  | 0.00\% | 0.00\% |
| 9 | Stone and clay mining and quarrying | \$10,287.7 |  | 0.00\% | 0.00\% |
| 10 | Chemical and fertilizer mineral mining | \$2,676.2 |  | 0.00\% | 0.00\% |
| 11 | New construction | \$617,049.7 |  | 0.00\% | 0.00\% |
| 12 | Repair \& maintenance construction | \$173,466.3 | \$6,678.0 | 3.85\% | 4.14\% |
| 13 | Ordinance and accessories | \$31,437.8 | \$0.5 | 0.00\% | 0.00\% |
| 14 | Food and kindred products | \$325,971.7 | \$1.8 | 0.00\% | 0.00\% |
| 15 | Tobacco manufactures | \$26,382.7 |  | 0.00\% | 0.00\% |
| 16 | Broad and narrow fabrics, yarn and thread mills | \$38,244.0 |  | 0.00\% | 0.00\% |
| 17 | Miscellaneous textile goods and floor coverings | \$15,981.8 |  | 0.00\% | 0.00\% |
| 18 | Apparel | \$64,183.8 | \$73.0 | 0.11\% | 0.05\% |
| 19 | Miscellaneous fabricated textile products | \$16,987.3 | \$1.1 | 0.01\% | 0.00\% |
| 20 | Lumber and wood products, except containers | \$72,327.1 |  | 0.00\% | 0.00\% |
| 21 | Wood containers | \$547.4 |  | 0.00\% | 0.00\% |
| 22 | Household furniture | \$18,418.6 |  | 0.00\% | 0.00\% |
| 23 | Other furniture and fixtures | \$18,358.3 |  | 0.00\% | 0.00\% |
| 24 | Paper \& allied products, except containers | \$81,982.3 | \$79.5 | 0.10\% | 0.05\% |
| 25 | Paperboard containers and boxes | \$25,510.8 | \$42.8 | 0.17\% | 0.03\% |
| 26 | Printing \& publishing | \$137,104.4 | \$706.9 | 0.52\% | 0.44\% |
| 27 | Chemicals and selected chemical products | \$97,886.9 | \$93.3 | 0.10\% | 0.06\% |
| 28 | Plastics and synthetic materials | \$40,672.4 |  | 0.00\% | 0.00\% |
| 29 | Drugs, cleaning and toilet preparations | \$69,241.5 | \$51.7 | 0.07\% | 0.03\% |
| 30 | Paints \& allied products | \$12,072.4 | \$109.1 | 0.90\% | 0.07\% |
| 31 | Petroleum refining and related industries | \$137,871.1 | \$117.4 | 0.09\% | 0.07\% |
| 32 | Rubber \& miscellaneous plastics products | \$85,571.6 | \$393.8 | 0.46\% | 0.24\% |
| 33 | Leather tanning and finishing | \$2,222.1 |  | 0.00\% | 0.00\% |
| 34 | Footwear and other leather products | \$6,477.5 | \$4.8 | 0.07\% | 0.00\% |
| 35 | Glass and glass products | \$16,085.3 | \$14.8 | 0.09\% | 0.01\% |
| 36 | Stone and clay products | \$43,731.7 | \$0.9 | 0.00\% | 0.00\% |
| 37 | Primary iron and steel manufacturing | \$68,090.7 | \$0.8 | 0.00\% | 0.00\% |
| 38 | Primary nonferrous metals manufacturing | \$56,376.3 | \$44.2 | 0.08\% | 0.03\% |
| 39 | Metal containers | \$11,904.3 |  | 0.00\% | 0.00\% |
| 40 | Heating, plumbing, \& fabricated structural metal products | \$43,930.4 |  | 0.00\% | 0.00\% |
| 41 | Screw machine products and stampings | \$31,973.5 | \$329.1 | 1.03\% | 0.20\% |
| 42 | Other fabricated metal products | \$44,424.2 | \$181.4 | 0.41\% | 0.11\% |
| 43 | Engines and turbines | \$14,095.6 | \$242.1 | 1.72\% | 0.15\% |
| 44 | Farm and garden machinery | \$10,976.9 |  | 0.00\% | 0.00\% |
| 45 | Construction and mining machinery | \$15,776.5 |  | 0.00\% | 0.00\% |
| 46 | Materials handling machinery and equipment | \$7,193.9 |  | 0.00\% | 0.00\% |
| 47 | Metalworking machinery and equipment | \$21,226.8 | \$3.6 | 0.02\% | 0.00\% |
| 48 | Special industrial machinery and equipment | \$16,253.8 |  | 0.00\% | 0.00\% |


| Table A8-2 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | SIC industry group | Total Industry Output (Millions) | Sales to Communications Except Radio \& Television (Millions) | Percentage of <br> Total Sales to Communications Except Radio \& Television | Sales to <br> Communications <br> Except Radio \& TV <br> as percent of Communications Total Revenue |
| 49 | General industrial machinery and equipment | \$23,235.9 | \$300.5 | 1.29\% | 0.19\% |
| 50 | Miscellaneous machinery, except electrical | \$20,003.1 | \$6.6 | 0.03\% | 0.00\% |
| 51 | Office, computing, and accounting machines | \$55,819.5 | \$57.6 | 0.10\% | 0.04\% |
| 52 | Service industry machines | \$22,408.9 |  | 0.00\% | 0.00\% |
| 53 | Electric industrial equipment and apparatus | \$22,665.3 | \$264.3 | 1.17\% | 0.16\% |
| 54 | Household appliances | \$16,360.5 | \$0.2 | 0.00\% | 0.00\% |
| 55 | Electric lighting and wiring equipment | \$17,614.8 | \$55.4 | 0.31\% | 0.03\% |
| 56 | Radio, TV, and communication equipment | \$40,699.5 | \$2,178.9 | 5.35\% | 1.35\% |
| 57 | Electronic components and accessories | \$48,653.6 | \$1,682.6 | 3.46\% | 1.04\% |
| 58 | Miscellaneous electrical machinery and supplies | \$20,823.0 | \$206.2 | 0.99\% | 0.13\% |
| 59 | Motor vehicles and equipment | \$203,105.4 | \$14.3 | 0.01\% | 0.01\% |
| 60 | Aircraft parts | \$82,127.6 |  | 0.00\% | 0.00\% |
| 61 | Other transportation equipment | \$24,082.1 | \$14.4 | 0.06\% | 0.01\% |
| 62 | Scientific and controlling instruments | \$85,463.4 | \$9.4 | 0.01\% | 0.01\% |
| 63 | Optical, opthalmic and photographic equipment | \$19,725.4 | \$68.0 | 0.34\% | 0.04\% |
| 64 | Miscellaneous manufacturing | \$33,089.1 | \$93.6 | 0.28\% | 0.06\% |
| 65 | Transportation and warehousing | \$285,767.5 | \$464.7 | 0.16\% | 0.29\% |
| 66 | Communications, except radio and TV | \$161,126.8 | \$33,184.2 | 20.60\% | 20.60\% |
| 67 | Radio and television broadcasting | \$29,396.2 |  | 0.00\% | 0.00\% |
| 68 | Private electric, gas, water and sanitary services | \$211,182.0 | \$1,638.4 | 0.78\% | 1.02\% |
| 69 | Wholesale and retail trade | \$844,444.2 | \$923.6 | 0.11\% | 0.57\% |
| 70 | Finance and insurance | \$459,462.0 | \$1,962.3 | 0.43\% | 1.22\% |
| 71 | Real estate and rental | \$805,418.9 | \$2,805.7 | 0.35\% | 1.74\% |
| 72 | Hotels; personal and repair service (exc. auto) | \$107,299.8 | \$483.5 | 0.45\% | 0.30\% |
| 73 | Business and professional services except medicinal | \$475,363.9 | \$4,591.9 | 0.97\% | 2.85\% |
| 74 | Eating and drinking places | \$209,394.0 | \$502.6 | 0.24\% | 0.31\% |
| 75 | Automobile repair and services | \$130,704.0 | \$523.0 | 0.40\% | 0.32\% |
| 76 | Amusements | \$78,192.4 | \$698.5 | 0.89\% | 0.43\% |
| 77 | Health, educational, and social services and nonprofit organizations | \$491,189.3 | \$230.9 | 0.05\% | 0.14\% |
| 78 | Federal government enterprises | \$45,396.3 | \$250.5 | 0.55\% | 0.16\% |
| 79 | State and local government enterprises | \$69,483.9 | \$67.6 | 0.10\% | 0.04\% |
| 80 | Noncomparable imports |  | \$3,758.0 |  |  |
|  | Total Sales | \$7,991,042.0 | \$66,211.6 | 0.83\% | 41.09\% |
|  | Value added | \$4,572,829.0 | \$94,949.0 | 2.08\% | 58.93\% |
| Source: Annual Input-Output Accounts of the U.S. Economy, 1987 Benchmark. Table 2 - The Use of Commodities, Disks, published April, 1994. The 1987 estimates are based on relationships in the economy found in the 1982 benchmark census of manufacturers. |  |  |  |  |  |


| Table A8-3 <br> 1987 Use of Communications Services by Sector of the Economy <br> Detailed data for those industries with greater than $2 \%$ of Total Communications Purchases |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| SIC industry group |  | Purchases of Communications Except Radio \& Television (Millions) | Communications Purchases as \% of Total Output | Communications <br> Purchases by <br> Industry as a <br> $\%$ of Total <br> Communications <br> Purchases |
| 69 Wholesale and Retail Trade | \$844,444.0 | \$10,147.0 | 1.20\% | 6.30\% |
| 690100 Wholesale Trade | \$423,750.7 | \$5,572.9 | 1.32\% | 3.46\% |
| 690200 Retail Trade, exc. Eating and Drinking | \$420,693.5 | \$4,574.0 | 1.09\% | 2.84\% |
| 70 Finance and Insurance | \$459,462.0 | \$7,597.0 | 1.65\% | 4.71\% |
| 700100 Banking | \$192,444.1 | \$3,774.1 | 1.96\% | 2.34\% |
| 700200 Credit Agencies other than Banks | \$33,018.2 | \$715.2 | 2.17\% | 0.44\% |
| 700300 Security and commodity brokers | \$61,150.2 | \$702.9 | 1.15\% | 0.44\% |
| 700400 Insurance Carriers | \$123,973.4 | \$1,256.2 | 1.01\% | 0.78\% |
| 700500 Insurance agents, brokers, and services | \$48,876.1 | \$1,148.6 | 2.35\% | 0.71\% |
| 73 Business and Professional Services except medicinal | \$475,364.0 | \$7,387.0 | 1.55\% | 4.58\% |
| 730101 Miscellaneous repair shops | \$23,195.3 | \$291.3 | 1.26\% | 0.18\% |
| 730102 Services to dwellings and other buildings | \$16,327.1 | \$179.8 | 1.10\% | 0.11\% |
| 730103 Personnel supply services | \$20,551.3 | \$189.6 | 0.92\% | 0.12\% |
| 730104 Computer and data processing services | \$60,821.4 | \$1,570.6 | 2.58\% | 0.97\% |
| 730105 Mgmt and consulting serv., testing \& res. labs | \$64,467.9 | \$1,086.2 | 1.68\% | 0.67\% |
| 730106 Detective and protective services | \$9,464.4 | \$210.7 | 2.23\% | 0.13\% |
| 730107 Miscellaneous equipment rental and leasing | \$28,587.6 | \$327.6 | 1.15\% | 0.20\% |
| 730108 Photofinishing labs and commercial photo | \$12,843.4 | \$185.0 | 1.44\% | 0.11\% |
| 730109 Other Business Services | \$45,290.6 | \$932.3 | 2.06\% | 0.58\% |
| 730200 Advertising | \$15,883.7 | \$210.3 | 1.32\% | 0.13\% |
| 730301 Legal Services | \$76,890.0 | \$1,301.8 | 1.69\% | 0.81\% |
| 730302 Engineering, architectual, and surveying services | \$60,153.9 | \$512.0 | 0.85\% | 0.32\% |
| 730303 Accting, auditing \& bkkping, \& misc. bus. services | \$40,887.3 | \$390.0 | 0.95\% | 0.24\% |
| 77 Health, educational, and soc serv \& nonprofit orgs | \$491,189.0 | \$4,536.0 | 0.92\% | 2.82\% |
| 770100 Doctors and Dentists | \$133,505.7 | \$1,530.8 | 1.15\% | 0.95\% |
| 770200 Hospitals | \$136,581.3 | \$715.2 | 0.52\% | 0.44\% |
| 770301 Nurshing and personal care facilities | \$29,720.7 | \$170.1 | 0.57\% | 0.11\% |
| 770302 Other medical \& health services, incl vet. | \$38,703.4 | \$357.8 | 0.92\% | 0.22\% |
| 770401 Elementary and secondary schools | \$10,851.2 | \$68.0 | 0.63\% | 0.04\% |
| 770402 Colleges, universities, and professional schools | \$30,508.5 | \$294.6 | 0.97\% | 0.18\% |
| 770403 Private libraries, voc. schools, and ed. serv | \$8,914.7 | \$149.1 | 1.67\% | 0.09\% |
| 770501 Business assoc. and prof. membership orgs | \$10,454.7 | \$78.2 | 0.75\% | 0.05\% |
| 770502 Labor orgs, civic, social, and fraternal assoc. | \$12,584.1 | \$150.7 | 1.20\% | 0.09\% |
| 770503 Religious organizations | \$23,610.0 | \$194.7 | 0.82\% | 0.12\% |
| 770504 Other membership organizations | \$12,291.4 | \$136.3 | 1.11\% | 0.08\% |
| 770600 Job training and related services | \$4,613.1 | \$26.8 | 0.58\% | 0.02\% |
| 770700 Child Day Care services | \$12,884.5 | \$140.8 | 1.09\% | 0.09\% |
| 770800 Residential care | \$9,095.3 | \$97.4 | 1.07\% | 0.06\% |
| 770900 Social Services | \$16,870.7 | \$425.1 | 2.52\% | 0.26\% |


|  | Residence Day Rates for 10 Minute calls |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5 Mile Call |  |  | 16 Mile Call |  |  | 39 Mile Call |  |  | 90 Mile Call |  |  | 200 Mile Call |  |  | 334 Mile Call |  |  | 678 Mile Call |  |  | 1418 Mile Call |  |  | 2455 Mile Call |  |  |
|  | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint |
| 1980 | \$1.01 |  |  | \$1.41 |  |  | \$2.35 |  |  | \$3.15 | \$2.37 | \$2.30 | \$3.54 | \$2.58 | \$2.50 | \$3.74 | \$2.81 | \$2.70 | \$3.77 | \$3.22 | \$2.90 | \$3.97 | \$3.61 | \$3.20 | \$4.17 | \$3.82 | \$3.30 |
| 1981 | 1.13 |  |  | 1.63 |  |  | 2.77 |  |  | 3.67 | 3.07 | 2.67 | 4.07 | 3.39 | 2.90 | 4.36 | 3.62 | 3.13 | 4.39 | 3.66 | 3.36 | 4.60 | 3.84 | 3.71 | 4.80 | 4.00 | 3.83 |
| 1982 | 1.76 | \$1.53 | \$1.53 | 2.38 | \$1.54 | \$1.55 | 3.00 | \$1.94 | \$1.92 | 3.90 | 3.28 | 3.27 | 4.09 | 3.42 | 3.43 | 4.37 | 3.63 | 3.62 | 4.49 | 3.74 | 3.74 | 4.60 | 3.84 | 3.85 | 5.15 | 4.32 | 4.32 |
| 1983 | 1.76 | 1.54 | 1.54 | 2.38 | 2.10 | 2.09 | 3.00 | 2.70 | 2.69 | 3.90 | 3.28 | 3.29 | 4.09 | 3.42 | 3.43 | 4.37 | 3.63 | 3.62 | 4.49 | 3.74 | 3.74 | 4.60 | 3.84 | 3.83 | 5.15 | 4.32 | 4.32 |
| 1984 | 1.65 | 1.48 | 1.62 | 2.27 | 1.96 | 2.19 | 2.79 | 2.56 | 2.76 | 3.69 | 3.33 | 3.49 | 3.87 | 3.48 | 3.63 | 4.06 | 3.72 | 3.80 | 4.18 | 3.84 | 3.98 | 4.29 | 3.96 | 4.06 | 4.83 | 4.47 | 4.67 |
| 1985 | 1.98 | 1.80 | 1.70 | 2.59 | 2.33 | 2.00 | 3.00 | 2.82 | 2.20 | 3.48 | 3.29 | 3.34 | 3.66 | 3.48 | 3.45 | 3.85 | 3.72 | 3.63 | 3.97 | 3.84 | 3.70 | 4.07 | 3.96 | 3.80 | 4.43 | 4.28 | 4.10 |
| 1986 | 1.75 | 1.67 | 1.61 | 2.26 | 2.12 | 2.11 | 2.57 | 2.47 | 2.46 | 2.95 | 2.85 | 2.84 | 3.14 | 3.04 | 3.03 | 3.33 | 3.25 | 3.24 | 3.44 | 3.35 | 3.34 | 3.54 | 3.46 | 3.45 | 3.79 | 3.68 | 3.67 |
| 1987 | 1.48 | 1.45 | 1.46 | 1.89 | 1.85 | 1.86 | 2.09 | 2.04 | 2.06 | 2.38 | 2.32 | 2.34 | 2.56 | 2.51 | 2.52 | 2.75 | 2.70 | 2.70 | 2.95 | 2.90 | 2.92 | 2.96 | 2.91 | 2.93 | 3.08 | 3.04 | 3.04 |
| 1988 | 1.47 | 1.44 | 1.44 | 1.78 | 1.75 | 1.76 | 1.98 | 1.94 | 1.94 | 2.16 | 2.12 | 2.13 | 2.34 | 2.40 | 2.40 | 2.43 | 2.50 | 2.50 | 2.64 | 2.69 | 2.71 | 2.64 | 2.71 | 2.73 | 2.75 | 2.84 | 2.84 |
| 1989 | 1.71 | 1.70 | 1.70 | 2.01 | 2.00 | 2.00 | 2.21 | 2.15 | 2.20 | 2.21 | 2.15 | 2.20 | 2.30 | 2.15 | 2.25 | 2.31 | 2.15 | 2.30 | 2.40 | 2.35 | 2.35 | 2.50 | 2.45 | 2.45 | 2.50 | 2.45 | 2.45 |
| 1990 | 1.71 | 1.70 | 1.71 | 1.97 | 1.90 | 1.90 | 1.97 | 1.90 | 1.90 | 2.15 | 2.10 | 2.10 | 2.15 | 2.10 | 2.10 | 2.30 | 2.10 | 2.30 | 2.39 | 2.30 | 2.30 | 2.49 | 2.40 | 2.40 | 2.49 | 2.40 | 2.40 |
| 1991 | 1.70 | 1.70 | 1.71 | 1.80 | 1.80 | 1.80 | 1.90 | 1.90 | 1.90 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.44 | 2.40 | 2.40 | 2.45 | 2.40 | 2.40 |
| 1992 | 2.00 | 1.99 | 2.00 | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 | 2.10 | 2.10 | 2.30 | 2.29 | 2.30 | 2.30 | 2.30 | 2.30 | 2.40 | 2.39 | 2.40 | 2.50 | 2.50 | 2.40 |
| 1993 | 2.20 | 2.20 | 2.20 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 |
| 1994 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 | 2.50 | 2.50 | 2.50 | 2.60 | 2.60 | 2.60 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.80 | 2.80 | 2.80 |
| 1995 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 | 2.50 | 2.50 | 2.50 | 2.60 | 2.60 | 2.60 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.80 | 2.80 | 2.80 |
| 1996 | 2.60 | 2.60 | 2.60 | 2.80 | 2.70 | 2.70 | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 | 2.90 | 2.80 | 2.90 | 3.00 | 2.90 | 2.90 | 3.00 | 2.90 | 3.00 | 3.00 | 2.90 | 3.00 | 3.10 | 3.10 | 3.10 |
|  | Percent Changes from 1986 to 1996 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 49\% | 55\% | 61\% | 24\% | 27\% | 28\% | 9\% | 13\% | 14\% | -5\% | -2\% | -1\% | -8\% | -8\% | -4\% | -10\% | -11\% | -10\% | -13\% | -13\% | -10\% | -15\% | -16\% | -13\% | -18\% | -16\% | -16\% |


|  | Residence Evening Rates for 10 Minute calls |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5 Mile Call |  |  | 16 Mile Call |  |  | 39 Mile Call |  |  | 90 Mile Call |  |  | 200 Mile Call |  |  | 334 Mile Call |  |  | 678 Mile Call |  |  | 1418 Mile Call |  |  | 2455 Mile Call |  |  |
|  | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCI | Sprint | AT\&T | MCI | Sprint | AT\&T | MCl | Sprint | AT\&T | MCI | Sprint | AT\&T | MCI | Sprint |
| 1980 | \$0.65 |  |  | \$0.91 |  |  | \$1.52 |  |  | \$2.04 | \$0.71 | \$0.92 | \$2.30 | \$0.77 | \$1.00 | \$2.43 | \$0.84 | \$1.08 | \$2.45 | \$0.97 | \$1.16 | \$2.58 | \$1.08 | \$1.28 | \$2.71 | \$1.15 | \$1.32 |
| 1981 | 0.73 |  |  | 1.05 |  |  | 1.80 |  |  | 2.38 | 1.41 | 1.07 | 2.64 | 1.57 | 1.16 | 2.83 | 1.68 | 1.25 | 2.85 | 1.69 | 1.35 | 2.98 | 1.77 | 1.48 | 3.11 | 1.85 | 1.53 |
| 1982 | 1.05 | \$0.65 | \$0.61 | 1.42 | \$0.89 | \$0.84 | 1.80 | \$1.12 | \$1.05 | 2.33 | 1.46 | 1.39 | 2.45 | 1.45 | 1.44 | 2.62 | 1.65 | 1.54 | 2.69 | 1.69 | 1.60 | 2.76 | 1.73 | 1.63 | 3.09 | 1.93 | 1.82 |
| 1983 | 1.05 | 0.92 | 0.89 | 1.42 | 1.26 | 1.19 | 1.80 | 1.39 | 1.30 | 2.33 | 1.61 | 1.59 | 2.45 | 1.70 | 1.68 | 2.62 | 1.81 | 1.72 | 2.69 | 1.86 | 1.80 | 2.76 | 1.91 | 1.82 | 3.09 | 2.13 | 1.99 |
| 1984 | 0.99 | 0.90 | 0.97 | 1.36 | 1.21 | 1.31 | 1.67 | 1.55 | 1.65 | 2.21 | 2.05 | 2.09 | 2.32 | 2.19 | 2.23 | 2.43 | 2.25 | 2.33 | 2.50 | 2.40 | 2.43 | 2.57 | 2.47 | 2.49 | 2.89 | 2.73 | 2.69 |
| 1985 | 1.18 | 1.10 | 1.12 | 1.55 | 1.44 | 1.32 | 1.80 | 1.71 | 1.45 | 2.08 | 1.98 | 2.05 | 2.19 | 2.09 | 2.13 | 2.31 | 2.14 | 2.25 | 2.38 | 2.32 | 2.30 | 2.44 | 2.40 | 2.36 | 2.65 | 2.59 | 2.56 |
| 1986 | 1.05 | 0.99 | 0.98 | 1.35 | 1.29 | 1.28 | 1.54 | 1.48 | 1.46 | 1.77 | 1.70 | 1.68 | 1.88 | 1.80 | 1.79 | 1.99 | 1.91 | 1.90 | 2.06 | 2.03 | 2.02 | 2.12 | 2.09 | 2.08 | 2.27 | 2.24 | 2.23 |
| 1987 | 0.91 | 0.86 | 0.90 | 1.17 | 1.10 | 1.16 | 1.29 | 1.25 | 1.28 | 1.47 | 1.43 | 1.45 | 1.58 | 1.44 | 1.56 | 1.70 | 1.45 | 1.68 | 1.82 | 1.80 | 1.81 | 1.83 | 1.81 | 1.82 | 1.90 | 1.89 | 1.89 |
| 1988 | 0.98 | 0.86 | 0.90 | 1.19 | 1.08 | 1.15 | 1.32 | 1.24 | 1.28 | 1.44 | 1.37 | 1.40 | 1.56 | 1.44 | 1.56 | 1.62 | 1.44 | 1.63 | 1.76 | 1.75 | 1.77 | 1.76 | 1.77 | 1.78 | 1.84 | 1.85 | 1.86 |
| 1989 | 1.14 | 1.12 | 1.12 | 1.34 | 1.31 | 1.32 | 1.48 | 0.92 | 1.45 | 1.48 | 1.45 | 1.45 | 1.54 | 1.45 | 1.45 | 1.54 | 1.52 | 1.52 | 1.60 | 1.55 | 1.55 | 1.67 | 1.55 | 1.55 | 1.67 | 1.55 | 1.55 |
| 1990 | 1.14 | 1.12 | 1.12 | 1.34 | 1.30 | 1.30 | 1.45 | 1.38 | 1.40 | 1.45 | 1.38 | 1.40 | 1.45 | 1.38 | 1.40 | 1.45 | 1.40 | 1.40 | 1.49 | 1.40 | 1.40 | 1.49 | 1.40 | 1.40 | 1.49 | 1.40 | 1.40 |
| 1991 | 1.11 | 1.10 | 1.11 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.45 | 1.35 | 1.40 | 1.45 | 1.35 | 1.40 | 1.45 | 1.35 | 1.40 | 1.49 | 1.40 | 1.40 | 1.79 | 1.40 | 1.40 | 1.49 | 1.40 | 1.40 |
| 1992 | 1.30 | 1.30 | 1.30 | 1.40 | 1.34 | 1.40 | 1.40 | 1.34 | 1.40 | 1.40 | 1.34 | 1.40 | 1.40 | 1.35 | 1.40 | 1.40 | 1.35 | 1.40 | 1.40 | 1.40 | 1.40 | 1.50 | 1.48 | 1.50 | 1.50 | 1.48 | 1.50 |
| 1993 | 1.20 | 1.20 | 1.20 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.40 | 1.40 | 1.40 | 1.50 | 1.48 | 1.50 | 1.50 | 1.48 | 1.50 | 1.50 | 1.48 | 1.50 | 1.50 | 1.49 | 1.50 | 1.50 | 1.49 | 1.50 |
| 1994 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 |
| 1995 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 |
| 1996 | 1.40 | 1.40 | 1.40 | 1.60 | 1.60 | 1.60 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 |
|  | Percent Changes from 1986 to 1996 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 33\% | 41\% | 43\% | 19\% | 24\% | 25\% | 10\% | 15\% | 16\% | -4\% | 0\% | 1\% | -10\% | -6\% | -5\% | -5\% | -1\% | 0\% | -8\% | -6\% | -6\% | -10\% | -9\% | -9\% | -16\% | -15\% | -15\% |


|  | Residence Night Rates for 10 Minute calls |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5 Mile Call |  |  | 16 Mile Call |  |  | 39 Mile Call |  |  | 90 Mile Call |  |  | 200 Mile Call |  |  | 334 Mile Call |  |  | 678 Mile Call |  |  | 1418 Mile Call |  |  | 2455 Mile Call |  |  |
|  | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCI | Sprint | AT\&T | MCI | Sprint | AT\&T | MCI | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint |
| 1980 | \$0.40 |  |  | \$0.56 |  |  | \$0.94 |  |  | \$1.26 | \$0.71 | \$0.92 | \$1.46 | \$0.77 | \$1.00 | \$1.49 | \$0.84 | \$1.08 | \$1.50 | \$0.97 | \$1.16 | \$1.58 | \$1.08 | \$1.28 | \$1.66 | \$1.15 | \$1.32 |
| 1981 | 0.45 |  |  | 0.65 |  |  | 1.10 |  |  | 1.46 | 1.01 | 1.07 | 1.62 | 1.12 | 1.16 | 1.74 | 1.21 | 1.25 | 1.75 | 1.21 | 1.35 | 1.84 | 1.27 | 1.48 | 1.92 | 1.33 | 1.53 |
| 1982 | 0.70 | \$0.51 | \$0.36 | 0.95 | \$0.69 | \$0.50 | 1.20 | \$0.87 | \$0.80 | 1.56 | 1.14 | 1.00 | 1.63 | 1.20 | 1.19 | 1.74 | 1.28 | 1.20 | 1.79 | 1.31 | 1.27 | 1.84 | 1.35 | 1.29 | 2.06 | 1.50 | 1.31 |
| 1983 | 0.70 | 0.61 | 0.59 | 0.95 | 0.84 | 0.79 | 1.20 | 1.08 | 0.99 | 1.56 | 1.25 | 1.20 | 1.63 | 1.32 | 1.30 | 1.74 | 1.41 | 1.33 | 1.67 | 1.45 | 1.40 | 1.84 | 1.48 | 1.48 | 2.06 | 1.66 | 1.56 |
| 1984 | 0.66 | 0.60 | 0.64 | 0.90 | 0.81 | 0.86 | 1.11 | 1.02 | 1.07 | 1.47 | 1.34 | 1.36 | 1.54 | 1.44 | 0.15 | 1.62 | 1.50 | 1.58 | 1.58 | 1.60 | 1.61 | 1.71 | 1.63 | 1.64 | 1.93 | 1.82 | 1.81 |
| 1985 | 0.79 | 0.73 | 0.92 | 1.03 | 0.96 | 1.05 | 1.20 | 1.14 | 1.15 | 1.39 | 1.32 | 1.36 | 1.46 | 1.39 | 1.45 | 1.54 | 1.44 | 1.52 | 1.51 | 1.55 | 1.56 | 1.62 | 1.60 | 1.59 | 1.77 | 1.71 | 1.73 |
| 1986 | 0.77 | 0.72 | 0.62 | 0.99 | 0.93 | 0.93 | 1.13 | 1.07 | 1.06 | 1.29 | 1.23 | 1.22 | 1.38 | 1.31 | 1.30 | 1.46 | 1.34 | 1.33 | 1.38 | 1.48 | 1.57 | 1.55 | 1.54 | 1.52 | 1.66 | 1.62 | 1.61 |
| 1987 | 0.69 | 0.67 | 0.68 | 0.88 | 0.87 | 0.86 | 0.98 | 0.95 | 0.95 | 1.11 | 1.09 | 1.04 | 1.20 | 1.18 | 1.04 | 1.29 | 1.27 | 1.05 | 1.26 | 1.37 | 1.37 | 1.39 | 1.37 | 1.38 | 1.44 | 1.42 | 1.43 |
| 1988 | 0.70 | 0.66 | 0.68 | 0.85 | 0.86 | 0.86 | 0.95 | 0.95 | 0.95 | 1.03 | 1.06 | 1.04 | 1.12 | 1.17 | 1.04 | 1.16 | 1.25 | 1.05 | 1.26 | 1.35 | 1.36 | 1.26 | 1.36 | 1.36 | 1.32 | 1.41 | 1.42 |
| 1989 | 0.97 | 0.92 | 0.85 | 1.10 | 1.05 | 0.95 | 1.20 | 1.15 | 1.05 | 1.20 | 1.15 | 1.15 | 1.21 | 1.15 | 1.15 | 1.22 | 1.15 | 1.15 | 1.26 | 1.22 | 1.22 | 1.30 | 1.25 | 1.25 | 1.32 | 1.25 | 1.25 |
| 1990 | 0.97 | 0.92 | 0.95 | 1.10 | 1.05 | 1.10 | 1.20 | 1.15 | 1.20 | 1.20 | 1.15 | 1.20 | 1.21 | 1.15 | 1.20 | 1.22 | 1.15 | 1.20 | 1.26 | 1.22 | 1.25 | 1.30 | 1.25 | 1.30 | 1.32 | 1.25 | 1.30 |
| 1991 | 1.05 | 1.00 | 1.00 | 1.13 | 1.10 | 1.10 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.22 | 1.20 | 1.20 | 1.25 | 1.20 | 1.20 | 1.30 | 1.30 | 1.30 | 1.33 | 1.30 | 1.30 | 1.35 | 1.30 | 1.30 |
| 1992 | 1.10 | 1.09 | 1.10 | 1.20 | 1.17 | 1.20 | 1.20 | 1.17 | 1.20 | 1.20 | 1.20 | 1.20 | 1.30 | 1.18 | 1.30 | 1.30 | 1.25 | 1.30 | 1.30 | 1.25 | 1.30 | 1.30 | 1.25 | 1.35 | 1.30 | 1.25 | 1.30 |
| 1993 | 1.10 | 1.10 | 1.10 | 1.20 | 1.17 | 1.20 | 1.20 | 1.17 | 1.20 | 1.20 | 1.17 | 1.20 | 1.30 | 1.18 | 1.30 | 1.30 | 1.29 | 1.30 | 1.30 | 1.29 | 1.30 | 1.30 | 1.29 | 1.30 | 1.30 | 1.29 | 1.30 |
| 1994 | 1.20 | 1.20 | 1.20 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.50 | 1.50 | 1.50 |
| 1995 | 1.20 | 1.20 | 1.20 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.50 | 1.50 | 1.50 |
| 1996 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
|  | Percent Changes from 1986 to 1996 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 69\% | 81\% | 109\% | 31\% | 39\% | 40\% | 15\% | 21\% | 22\% | 16\% | 22\% | 23\% | 9\% | 15\% | 15\% | 3\% | 12\% | 13\% | 16\% | 8\% | 2\% | 3\% | 4\% | 5\% | -4\% | -1\% | -1\% |


|  | Business Day Rates for 10 Minute calls |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5 Mile Call |  |  | 16 Mile Call |  |  | 39 Mile Call |  |  | 90 Mile Call |  |  | 200 Mile Call |  |  | 334 Mile Call |  |  | 678 Mile Call |  |  | 1418 Mile Call |  |  | 2455 Mile Call |  |  |
|  | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCI | Sprint | AT\&T | MCI | Sprint | AT\&T | MCl | Sprint | AT\&T | MCI | Sprint | AT\&T | MCI | Sprint | AT\&T | MCl | Sprint |
| 1980 | \$1.01 |  |  | \$1.41 |  |  | \$2.35 |  |  | \$3.15 | \$2.37 | \$2.30 | \$3.54 | \$2.58 | \$2.50 | \$3.74 | \$2.81 | \$2.70 | \$3.77 | \$3.22 | \$2.90 | \$3.97 | \$3.61 | \$3.20 | \$4.17 | \$3.82 | \$3.30 |
| 1981 | 1.13 |  |  | 1.63 |  |  | 2.77 |  |  | 3.67 | 3.07 | 2.67 | 4.07 | 3.39 | 2.90 | 4.36 | 3.62 | 3.13 | 4.39 | 3.66 | 3.36 | 4.60 | 3.84 | 3.71 | 4.80 | 4.00 | 3.83 |
| 1982 | 1.76 | \$1.53 | \$1.53 | 2.38 | \$1.54 | \$1.55 | 3.00 | \$1.94 | \$1.92 | 3.90 | 3.28 | 3.27 | 4.09 | 3.42 | 3.43 | 4.37 | 3.63 | 3.62 | 4.49 | 3.74 | 3.74 | 4.60 | 3.84 | 3.85 | 5.15 | 4.32 | 4.32 |
| 1983 | 1.76 | 1.54 | 1.54 | 2.38 | 2.10 | 2.09 | 3.00 | 2.70 | 2.69 | 3.90 | 3.28 | 3.29 | 4.09 | 3.42 | 3.43 | 4.37 | 3.63 | 3.62 | 4.49 | 3.74 | 3.74 | 4.60 | 3.84 | 3.83 | 5.15 | 4.32 | 4.32 |
| 1984 | 1.65 | 1.48 | 1.62 | 2.27 | 1.96 | 2.19 | 2.79 | 2.56 | 2.76 | 3.69 | 3.33 | 3.49 | 3.87 | 3.48 | 3.63 | 4.06 | 3.72 | 3.80 | 4.18 | 3.84 | 3.98 | 4.29 | 3.96 | 4.06 | 4.83 | 4.47 | 4.67 |
| 1985 | 1.98 | 1.80 | 1.70 | 2.59 | 2.33 | 2.00 | 3.00 | 2.82 | 2.20 | 3.48 | 3.29 | 3.34 | 3.66 | 3.48 | 3.45 | 3.85 | 3.72 | 3.63 | 3.97 | 3.84 | 3.70 | 4.07 | 3.96 | 3.80 | 4.43 | 4.28 | 4.10 |
| 1986 | 1.75 | 1.67 | 1.61 | 2.26 | 2.12 | 2.11 | 2.57 | 2.47 | 2.46 | 2.95 | 2.85 | 2.84 | 3.14 | 3.04 | 3.03 | 3.33 | 3.25 | 3.24 | 3.44 | 3.35 | 3.34 | 3.54 | 3.46 | 3.45 | 3.79 | 3.68 | 3.67 |
| 1987 | 1.48 | 1.45 | 1.46 | 1.89 | 1.85 | 1.86 | 2.09 | 2.04 | 2.06 | 2.38 | 2.32 | 2.34 | 2.56 | 2.51 | 2.52 | 2.75 | 2.70 | 2.70 | 2.95 | 2.90 | 2.92 | 2.96 | 2.91 | 2.93 | 3.08 | 3.04 | 3.04 |
| 1988 | 1.47 | 1.44 | 1.44 | 1.78 | 1.75 | 1.76 | 1.98 | 1.94 | 1.94 | 2.16 | 2.12 | 2.13 | 2.34 | 2.40 | 2.40 | 2.43 | 2.50 | 2.50 | 2.64 | 2.69 | 2.71 | 2.64 | 2.71 | 2.73 | 2.75 | 2.84 | 2.84 |
| 1989 | 1.71 | 1.70 | 1.70 | 2.01 | 2.00 | 2.00 | 2.21 | 2.15 | 2.20 | 2.21 | 2.15 | 2.20 | 2.30 | 2.15 | 2.25 | 2.31 | 2.15 | 2.30 | 2.40 | 2.35 | 2.35 | 2.50 | 2.45 | 2.45 | 2.50 | 2.45 | 2.45 |
| 1990 | 1.71 | 1.70 | 1.71 | 1.97 | 1.90 | 1.90 | 1.97 | 1.90 | 1.90 | 2.15 | 2.10 | 2.10 | 2.15 | 2.10 | 2.10 | 2.30 | 2.10 | 2.30 | 2.39 | 2.30 | 2.30 | 2.49 | 2.40 | 2.40 | 2.49 | 2.40 | 2.40 |
| 1991 | 1.70 | 1.70 | 1.71 | 1.80 | 1.80 | 1.80 | 1.90 | 1.90 | 1.90 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.44 | 2.40 | 2.40 | 2.45 | 2.40 | 2.40 |
| 1992 | 2.00 | 1.99 | 2.00 | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 | 2.10 | 2.10 | 2.30 | 2.29 | 2.30 | 2.30 | 2.30 | 2.30 | 2.40 | 2.39 | 2.40 | 2.50 | 2.50 | 2.40 |
| 1993 | 2.20 | 2.27 | 2.27 | 2.20 | 2.27 | 2.27 | 2.20 | 2.27 | 2.27 | 2.40 | 2.45 | 2.45 | 2.40 | 2.45 | 2.45 | 2.40 | 2.51 | 2.51 | 2.40 | 2.51 | 2.51 | 2.58 | 2.62 | 2.62 | 2.58 | 2.63 | 2.63 |
| 1994 | 2.20 | 2.27 | 2.54 | 2.20 | 2.27 | 2.54 | 2.20 | 2.26 | 2.54 | 2.40 | 2.45 | 2.77 | 2.40 | 2.45 | 2.77 | 2.40 | 2.51 | 2.77 | 2.40 | 2.51 | 2.77 | 2.58 | 2.62 | 2.98 | 2.58 | 2.63 | 2.98 |
| 1995 | 2.82 | 2.61 | 2.72 | 2.82 | 2.61 | 2.72 | 2.82 | 2.61 | 2.72 | 3.04 | 2.82 | 2.94 | 3.04 | 2.82 | 2.94 | 3.04 | 2.82 | 2.94 | 3.04 | 2.80 | 2.94 | 3.19 | 2.95 | 3.08 | 3.19 | 2.95 | 3.08 |
| 1996 | 3.10 | 3.09 | 2.72 | 3.10 | 3.09 | 2.72 | 3.10 | 3.09 | 2.72 | 3.35 | 3.34 | 2.72 | 3.35 | 3.34 | 2.94 | 3.35 | 3.34 | 2.94 | 3.35 | 3.34 | 2.94 | 3.51 | 3.50 | 3.08 | 3.51 | 3.50 | 3.08 |
| Percent Changes from 1986 to 1996 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 77\% | 85\% | 69\% | 37\% | 46\% | 29\% | 21\% | 25\% | 11\% | 14\% | 17\% | -4\% | 7\% | 10\% | -3\% | 1\% | 3\% | -9\% | -3\% | -0\% | -12\% | -1\% | 1\% | -11\% | -7\% | -5\% | -16\% |


|  | Business Night Rates for 10 Minute calls |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5 Mile Call |  |  | 16 Mile Call |  |  | 39 Mile Call |  |  | 90 Mile Call |  |  | 200 Mile Call |  |  | 334 Mile Call |  |  | 678 Mile Call |  |  | 1418 Mile Call |  |  | 2455 Mile Call |  |  |
|  | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCI | Sprint | AT\&T | MCI | Sprint | AT\&T | MCl | Sprint | AT\&T | MCl | Sprint | AT\&T | MCI | Sprint | AT\&T | MCl | Sprint |
| 1980 | \$0.40 |  |  | \$0.56 |  |  | \$0.94 |  |  | \$1.26 | \$0.71 | \$0.92 | \$1.46 | \$0.77 | \$1.00 | \$1.49 | \$0.84 | \$1.08 | \$1.50 | \$0.97 | \$1.16 | \$1.58 | \$1.08 | \$1.28 | \$1.66 | \$1.15 | \$1.32 |
| 1981 | 0.45 |  |  | 0.65 |  |  | 1.10 |  |  | 1.46 | 1.01 | 1.07 | 1.62 | 1.12 | 1.16 | 1.74 | 1.21 | 1.25 | 1.75 | 1.21 | 1.35 | 1.84 | 1.27 | 1.48 | 1.92 | 1.33 | 1.53 |
| 1982 | 0.70 | \$0.51 | \$0.36 | 0.95 | \$0.69 | \$0.50 | 1.20 | \$0.87 | \$0.80 | 1.56 | 1.14 | 1.00 | 1.63 | 1.20 | 1.19 | 1.74 | 1.28 | 1.20 | 1.79 | 1.31 | 1.27 | 1.84 | 1.35 | 1.29 | 2.06 | 1.50 | 1.31 |
| 1983 | 0.70 | 0.61 | 0.59 | 0.95 | 0.84 | 0.79 | 1.20 | 1.08 | 0.99 | 1.56 | 1.25 | 1.20 | 1.63 | 1.32 | 1.30 | 1.74 | 1.41 | 1.33 | 1.67 | 1.45 | 1.40 | 1.84 | 1.48 | 1.48 | 2.06 | 1.66 | 1.56 |
| 1984 | 0.66 | 0.60 | 0.64 | 0.90 | 0.81 | 0.86 | 1.11 | 1.02 | 1.07 | 1.47 | 1.34 | 1.36 | 1.54 | 1.44 | 0.15 | 1.62 | 1.50 | 1.58 | 1.58 | 1.60 | 1.61 | 1.71 | 1.63 | 1.64 | 1.93 | 1.82 | 1.81 |
| 1985 | 0.79 | 0.73 | 0.92 | 1.03 | 0.96 | 1.05 | 1.20 | 1.14 | 1.15 | 1.39 | 1.32 | 1.36 | 1.46 | 1.39 | 1.45 | 1.54 | 1.44 | 1.52 | 1.51 | 1.55 | 1.56 | 1.62 | 1.60 | 1.59 | 1.77 | 1.71 | 1.73 |
| 1986 | 0.77 | 0.72 | 0.62 | 0.99 | 0.93 | 0.93 | 1.13 | 1.07 | 1.06 | 1.29 | 1.23 | 1.22 | 1.38 | 1.31 | 1.30 | 1.46 | 1.34 | 1.33 | 1.38 | 1.48 | 1.57 | 1.55 | 1.54 | 1.52 | 1.66 | 1.62 | 1.61 |
| 1987 | 0.69 | 0.67 | 0.68 | 0.88 | 0.87 | 0.86 | 0.98 | 0.95 | 0.95 | 1.11 | 1.09 | 1.04 | 1.20 | 1.18 | 1.04 | 1.29 | 1.27 | 1.05 | 1.26 | 1.37 | 1.37 | 1.39 | 1.37 | 1.38 | 1.44 | 1.42 | 1.43 |
| 1988 | 0.70 | 0.66 | 0.68 | 0.85 | 0.86 | 0.86 | 0.95 | 0.95 | 0.95 | 1.03 | 1.06 | 1.04 | 1.12 | 1.17 | 1.04 | 1.16 | 1.25 | 1.05 | 1.26 | 1.35 | 1.36 | 1.26 | 1.36 | 1.36 | 1.32 | 1.41 | 1.42 |
| 1989 | 0.97 | 0.92 | 0.85 | 1.10 | 1.05 | 0.95 | 1.20 | 1.15 | 1.05 | 1.20 | 1.15 | 1.15 | 1.21 | 1.15 | 1.15 | 1.22 | 1.15 | 1.15 | 1.26 | 1.22 | 1.22 | 1.30 | 1.25 | 1.25 | 1.32 | 1.25 | 1.25 |
| 1990 | 0.97 | 0.92 | 0.95 | 1.10 | 1.05 | 1.10 | 1.20 | 1.15 | 1.20 | 1.20 | 1.15 | 1.20 | 1.21 | 1.15 | 1.20 | 1.22 | 1.15 | 1.20 | 1.26 | 1.22 | 1.25 | 1.30 | 1.25 | 1.30 | 1.32 | 1.25 | 1.30 |
| 1991 | 1.05 | 1.00 | 1.00 | 1.13 | 1.10 | 1.10 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.22 | 1.20 | 1.20 | 1.25 | 1.20 | 1.20 | 1.30 | 1.30 | 1.30 | 1.33 | 1.30 | 1.30 | 1.35 | 1.30 | 1.30 |
| 1992 | 1.10 | 1.09 | 1.10 | 1.20 | 1.17 | 1.20 | 1.20 | 1.17 | 1.20 | 1.20 | 1.20 | 1.20 | 1.30 | 1.18 | 1.30 | 1.30 | 1.25 | 1.30 | 1.30 | 1.25 | 1.30 | 1.30 | 1.25 | 1.35 | 1.30 | 1.25 | 1.30 |
| 1993 | 1.40 | 1.51 | 1.51 | 1.40 | 1.51 | 1.51 | 1.40 | 1.51 | 1.51 | 1.40 | 1.65 | 1.65 | 1.40 | 1.65 | 1.65 | 1.40 | 1.74 | 1.74 | 1.40 | 1.74 | 1.74 | 1.50 | 1.82 | 1.82 | 1.50 | 1.82 | 1.82 |
| 1994 | 1.40 | 1.51 | 1.62 | 1.40 | 1.51 | 1.62 | 1.40 | 1.51 | 1.62 | 1.40 | 1.65 | 1.73 | 1.40 | 1.65 | 1.73 | 1.40 | 1.74 | 1.73 | 1.40 | 1.74 | 1.73 | 1.50 | 1.82 | 1.85 | 1.50 | 1.82 | 1.85 |
| 1995 | 1.80 | 1.66 | 1.74 | 1.80 | 1.66 | 1.74 | 1.80 | 1.66 | 1.74 | 1.91 | 1.77 | 1.84 | 1.91 | 1.77 | 1.84 | 1.91 | 1.77 | 1.84 | 1.91 | 1.77 | 1.84 | 1.99 | 1.84 | 1.92 | 1.99 | 1.84 | 1.92 |
| 1996 | 1.98 | 1.97 | 1.74 | 1.98 | 1.97 | 1.74 | 1.98 | 1.97 | 1.74 | 2.10 | 2.09 | 1.84 | 2.10 | 2.09 | 1.84 | 2.10 | 2.09 | 1.84 | 2.10 | 2.09 | 1.84 | 2.19 | 2.18 | 1.92 | 2.19 | 2.18 | 1.92 |
| Percent Changes from 1986 to 1996 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 157\% | 173\% | 180\% | 100\% | 110\% | 87\% | 75\% | 83\% | 64\% | 63\% | 70\% | 51\% | 52\% | 59\% | 42\% | 44\% | 56\% | 38\% | 52\% | 41\% | 17\% | 41\% | 42\% | 26\% | 32\% | 35\% | 19\% |

Customer Response Survey
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[^1]:    ${ }^{1}$ BLS revised the PPI telephone methodology and sample in June 1995.

[^2]:    ${ }^{2}$ Some previous estimates have been revised.

[^3]:    ${ }^{3}$ Some previous estimates have been revised.
    4 Rate based on unlimited service where available, and measured service with 200 same-zone local calls elsewhere.

[^4]:    5 Some previous estimates have been revised.
    ${ }^{6}$ Rate based on unlimited service where available, and measured service with 200 same-zone local calls elsewhere.

[^5]:    ${ }^{7}$ Some previous estimates have been revised.
    ${ }^{8}$ Rate based on unlimited service where available, and measured service with 200 same-zone local calls elsewhere.

[^6]:    10 From annual Rural Utilities Service Statistical Report: Rural Telecommunications Borrowers.
    11 Excludes miscellaneous revenues and uncollectables.

[^7]:    ${ }^{16}$ Based on the percentage of households in the group with telephone service, as estimated by

[^8]:    ${ }^{18}$ Based on the percentage of households in the group with telephone service, as estimated by Census data. Data in the table are rounded to the nearest $\$ 0.10$.
    ${ }^{19}$ These figures represent expenditures for toll service, connection charges, additional access lines, additional local service features such as touch-tone calling or call waiting, "900 service" calls, directory listing charges, information calls, inside wiring maintenance plans, etc. The values in the tables are monthly bills, less the average cost for private line rotary service with unlimited local calling, based on the Urban Rates Survey. Access charges are significantly lower in rural areas because exchanges are significantly smaller. Rural rates were estimated as the Urban Rates Survey averages, less $\$ 3.00$ per month. Similar adjustments might be warranted for low income and elderly households, reflecting lifeline rates.

[^9]:    ${ }^{20}$ Based on the percentage of households in the group with telephone service, as estimated by Census data. Data in the table are rounded to the nearest $\$ 0.10$.
    ${ }^{21}$ These figures represent expenditures for toll service, connection charges, additional access lines, additional local service features such as touch-tone calling or call waiting, "900 service" calls, directory listing charges, information calls, inside wiring maintenance plans, etc. The values in the tables are monthly bills, less the average cost for private line rotary service with unlimited local calling, based on the Urban Rates Survey. Access charges are significantly lower in rural areas because exchanges are significantly smaller. Rural rates were estimated as the Urban Rates Survey averages, less $\$ 3.00$ per month. Similar adjustments might be warranted for low income and elderly households, reflecting lifeline rates.

[^10]:    ** The measured service rate plus 200 five minute, same zone, business day calls

